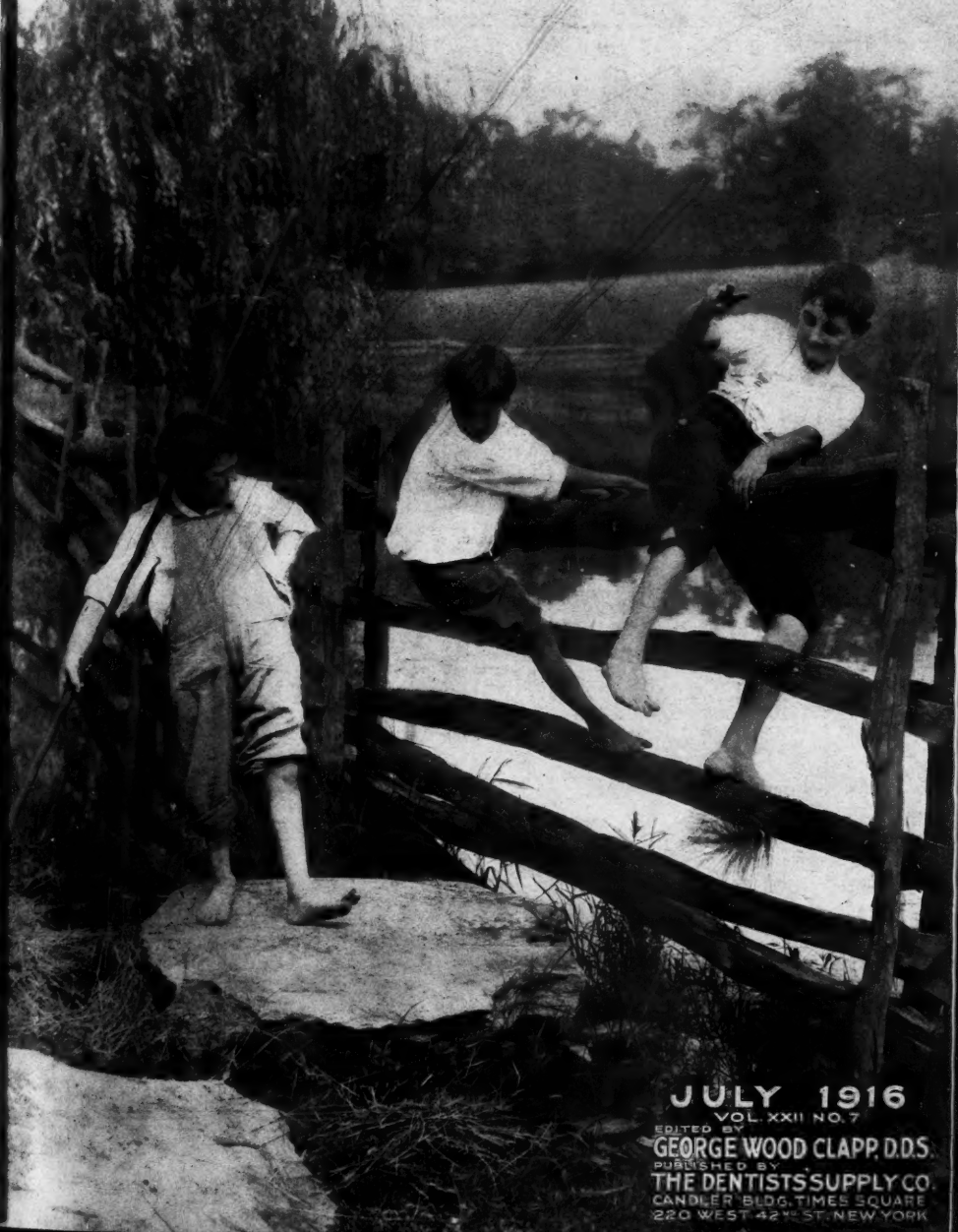


THE DENTAL DIGEST



JULY 1916

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GEORGE WOOD CLAPP, D.D.S.

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THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., Editor

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Vol. XXII

JULY, 1916

No. 7

CLOSED MOUTH IMPRESSIONS*

By SAMUEL G. SUPPLEE, NEW YORK, N. Y.

FIFTH PAPER

PSYCHOLOGY IN IMPRESSION TAKING

Every dentist who makes a success of practice is a practical psychologist. And many a dentist of only ordinary skill has built a good practice by means of psychology, but understanding the minds of his patients and by enlisting their interest and coöperation.

Perhaps such enlistment of coöperation is nowhere more necessary than in the taking of impressions, the making of dentures and the mastery of dentures by patients. As the result of long experience with many difficult cases, Mr. Supplee has found the instructions to patients dialogued here, very helpful.—EDITOR.

One of the dentist's greatest assets in taking an impression is to get a patient interested to help, and to understand that she will be largely responsible for success or failure. In order to get perfect coöperation, a patient must know what to do and why it is done. It is not to be expected that a patient can assist very much until the base impressions have been taken and the bite is established. When the patient has something in the mouth to bite on, she will be able to make the movements very easily and definitely.

The following dialogue between a dentist and Mrs. Brown, a patient, may help some dentists in giving patients proper instructions.

"Now Mrs. Brown, I am going to try to make you a successful plate, one with which you can smile and talk, and eat, and not have it drop.

*This article began in the January, 1916, number

I can't do this very well unless I have your assistance. It is going to depend upon you very largely whether you get a successful plate or not. Now, don't look so serious, for I want to see you smile, and if you don't I can not start work until you do (This generally brings a smile). Mrs. Brown attempts to smile. When she does so, stop her in the midst of it.

"That's it, you can no doubt smile more. I want to see about how far you raise your cheeks and lips when you laugh heartily, for your plate must be made to correspond to these movements." (Mrs. Brown attempts to pull the lips and cheeks back until she succeeds fairly well.)



Whistling movements to carry the buccal attachments into the anterior position

"That is fine, Mrs. Brown. Now let me see how you would reach your lips out if you were going to take something into your mouth or whistle. *That's good.* Now I want you to alternately pull your lips and cheeks back as in smiling, then reach them forward as in whistling, just as I am doing." (Here turn your face so the patient gets a profile view and I show her just what to do. In 99 cases out of 100 it will take only a few minutes for her to be able to do it perfectly.)

"Now Mrs. Brown don't strain in giving these movements. You must do it easily and definitely, for that is the way they will be given when you are wearing the plate. Now these movements are what I call "face movements" and when I say "Give the face movements," move your lips forward and backward **quickly** until I say "rest." Then relax

while I give you a little face massage. Last, but not least, when I tell you to close, don't open your lips or mouth until I tell you to. I may want to open your lips and look into your mouth, but you must not move the jaw until I say "open."

"If you will observe the instructions and give these movements quickly and definitely, I shall be able to make you a very fine plate: but if not, we are both going to have trouble."

This explanation appeals to almost every patient and you will be well repaid for these few moments of explanation by securing the coöperation of the patient.



Patient "muscle-trimming" upper impression by lip movements

If the patient is unable to respond quickly and definitely, you can nearly duplicate these movements and light massage of the cheeks forward and backward, and at the same time explain that it will mean that she will have a little more trouble in getting used to them, and that the plates may have to be trimmed a little after they are finished and have been used for a while before they will hold up tight under all conditions, and not hurt.

This will be of great value to you later in case of trouble, and in case your first efforts are not wholly successful, for the patient will in the meantime endeavor to develop the movements and your second efforts will result favorably.

THE COW-BELL METHOD OF CASTING ALUMINUM BASES

By W. CLYDE McCLELLAND, D.D.S., KANSAS CITY, MO.

The deep-seated prejudice existing among dentists against the use of aluminum for bases ought to be outgrown. Curiously enough the strongest prejudice is held by men who at one time were very zealous in their attempts to employ this material. These men had good reason for discarding this kind of metal base, but to-day the reason does not exist.

A cast aluminum denture of the present type bears about as little resemblance to the old swaged plate as the modern electric dental lathe bears to the old foot power polisher.

But the principal reason for the almost universal failures connected with its use, was the dentist's inability to secure aluminum which did not contain at least six per cent. iron and silicon. Modern methods of refining yield aluminum more than ninety-nine per cent. pure, and this is available in the market at a ridiculously low figure.

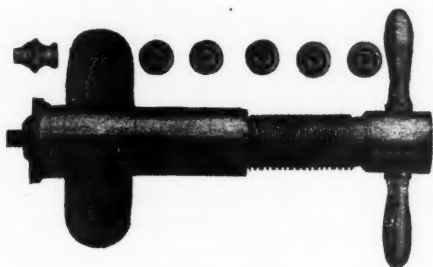
The aluminum blank was swaged between a die and counter die and in the process the metal became impregnated with these other metals. A very small amount it was to be sure, but nevertheless sufficient, in conjunction with the highly electropositive aluminum to cause disintegration by electrolysis when placed in a bath such as the mouth affords. Another valid objection to the swaged base was the insecurity of the method employed to attach the vulcanite to the base, notching, spurring, and punched loops even would let go, much to the disgust of the patient and to the annoyance of the dentist.

It was some time before the dentist learned that the chemical elements of aluminum and those used in vulcanite were incompatible, and that a piece of tin foil or weighted rubber placed between the two in packing would obviate this difficulty.

The cast aluminum base has all the advantages of a gold base. The rugae and an edge to finish to are important improvements over the old swaged base. A material that may be swaged upon, like the Spence plaster compound, is used to pour the impression. This is very important, because the time of running up a metal die is saved. It is just as important that the finished base be swaged, for aluminum on cooling, shrinks, and this contraction cannot be controlled (notwithstanding what advertisers of casting machines say to the contrary), so this lifting away of the aluminum from the model, which is very perceptible in mouths with a high vault, must be corrected. If an air chamber or relief is to be used, a piece of physician's adhesive tape is cut to the size required

and attached to the Spence compound model. More than one thickness is often used. From this Spence compound die an impression is rubbed and polished with soap stone or talcum powder in a large sprinkle-top can. After polishing with a good sized piece of cotton and talcum powder, the impression is poured with an investment composed of equal parts of plaster, silax, and sharp white sand. The sand may be obtained at McComb, Ill., or from any tile mantle dealer.

This investment gets very hard in eight or ten minutes. It is then placed in water just hot enough to be uncomfortable to the hands, left a few minutes, removed, separated and placed under the gas burner to dry out.



No. 1. Sprue machine

While this investment model is still damp, it is sprinkled with talcum powder and rubbed with a large piece of cotton until it presents a glazed or polished surface. This operation fills up the microscopic holes and presents a surface to the finished casting that needs no polishing. The duplicate model is now ready for the wax pattern. A sheet of thin base plate beeswax is warmed slightly over the Bunsen flame and pressed down without stretching—care should be used not to get the pattern too thin in the middle or deepest portion of the model. With a dull knife heated in the Bunsen flame, the extra wax is trimmed away neatly from around the border and heel of the pattern and then sealed to the model with a very hot spatula. This last operation is to prevent the investment, in flasking, from running under the pattern.

The barrel of the wax sprue machine, shown in Fig. No. 1, is filled with clean beeswax. The plunger is screwed into the barrel a few turns and both are warmed over the flame. The machine will make a ten gauge wax wire, without one of the special points furnished with it. Ten or twelve inches of this size are run out, and used around the border of the pattern, coming up about three-eighths of an inch shy on the crest near the one tuberosity and continuing along the palatal border of the crest to the tuberosity on the other side to meet the starting point. This

wax wire is now sealed and smoothed up to the pattern on the outside only, the inner surface forming a slight under cut that is desirable for holding the vulcanite.

One of the special points is now attached to the wax gum and several inches run out. This string of wax is held in the right hand while the pattern, upon the investment model, is held in the left. The end of the

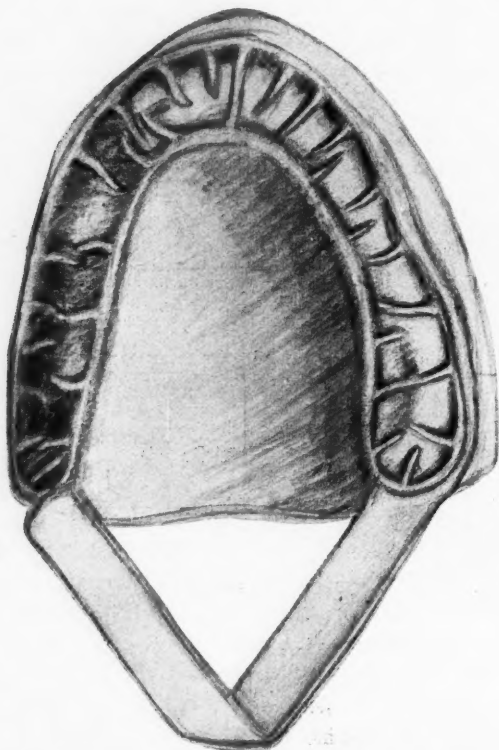


Fig. 2. The arms of the V joined to posterior portion of the pattern

string is placed on the crest of the ridge, pulled over the twelve gauge wax border and cut off with the thumb nail of the right hand; this operation is continued all around the entire inner surface of the twelve gauge wax. With a hot spatula each little piece of the wax string is made a part of the pattern. If the wax wire former is not available the beeswax may be rolled down to the desired size between two pieces of plate glass.

The pattern is now "waxed up" and smoothed by projecting a small flame against the wax with a chip blower. Care should be taken not

to get the wax in the central portion of the model too hot as it will raise up often and pass unnoticed—consequently a thick base when cast. For this reason it is advisable to cool the pattern in water once or twice when finishing. The wax will work better and the cast base will be smoother.

The sprue is made by cutting a strip about one half inch wide from the end of a sheet of wax and folded upon itself lengthwise. It is then bent in the middle to form a V. The arms of the V are joined to the posterior portion of the pattern. (Figure 2.)

The Cow-bell Method of casting aluminum bases was originated by Dr. Dayton Dunbar Campbell early in 1907, subsequent to Dr. Taggart's announcement of his method of casting gold in January of the same year.

A No. 4 Hoosier Cow-bell and a yard of No. 0 brass safety chain costs fifty cents. (Figure 3.) This comprises the chief expense of this casting outfit. With the exception of a few minor details the method is as follows:

Grasp the strap of the bell in a heavy vise and pull it off; then file down the head of the rivet that holds the clapper and drive it out. Straighten up the bottom with a hammer, and never mind the holes. Drill a small hole near the mouth of the bell in each of the narrow sides; then make a hook of baling wire for each hole, and bend it so it will easily go in and out of the drilled hole. Fasten a hook in each end of the chain; then double the chain, and with the hooks dangling down evenly on each side, tie the chain together about six inches from the top with a piece of good, heavy binding wire. This last precaution prevents one side of the cow-bell from hanging lower than the other and spilling the melted metal. The use of the chain is the only change that has been made in the cow-bell method since its introduction seven years ago. Formerly, baling wire was used instead of this chain, but the wire was found too stiff and awkward.

After the sprues are provided for, the model with wax pattern attached is placed in a bowl of water to soak while a mix is made of the same investment compound used for the model. The cow-bell is filled nearly full, and the model and pattern removed from the water. While the investment is still soft the wax pattern is carefully painted over, using particular caution that the investment is worked well in around the wax loops or cleats, and that no air bubbles exist next the pattern anywhere. Then the mass is lowered to the very bottom of the bell. This must be done, of course, before the investment sets, and the investment must not be made thick enough to interfere with a correct immersion of the model and pattern, nor so thin that it will not hold the pattern in place after it is lowered to position.

The investment should set in eight to ten minutes, after which the surface is cupped out slightly to hold the melted aluminum later on. The holes in the sides of the bell should be well cleaned out now that no little particles will be loosened later to fall down the sprue holes and make a faulty casting. The cow-bell flask may be placed over a slow fire within an hour, but it is better to wait till the morrow, if possible. When, ready the cow-bell is placed over the fire and the wax melted out. It seems to make little difference whether the wax is allowed to partly

run out of the mould as it is heated, or if it is all absorbed by the investment. It must be heated sufficiently to remove fully all the wax. As the wax is nearly all burned out, the ingot of aluminum should be placed on the stove to get thoroughly heated up, thereby saving time with the blowpipe.

When ready to cast, the cow-bell is placed upright against anything that will resist heat and not be easily upset, usually a soldering block or vulcanite flask. Then place the partially heated ingot over the sprue hole and melt with the blowpipe. No flux of any kind should be used. On melting, a scum will form over the metal. This should not be scraped off, as another would form immediately, and besides it acts as a protection to the metal beneath. On casting, the metal breaks through this film of dross, and only the bright, clean metal goes in the mould.

When the metal is melted, hook the chain into each side of the bell, and let it hang at full arm's length. Step out from under the chandelier and swing the bell back and forth like a huge pendulum. Increase the swing to clear over the head, round and round, about eighteen or twenty times. The swing should not be hur-



The bell at full arm's length

ried, just enough to keep the full swing going. Resuming the pendulum swing permits observations as to progress, and when the last bit of metal crystallizes lay the bell on the bench and break off the excess metal and throw the flask and all into water. When cool, the contents of the bell are removed by jarring it mouth downward. The investment is broken away from the plate, and the little excess remaining on the plate is removed with a hacksaw.

Then a half-inch layer of putty is placed in the swager, and the original Spence model with the cast plate over it is placed in position, model down. A piece of cheese-cloth is placed over the plate, then putty tamped over and around plate and model. The plunger is placed in position and hit one blow with a sixteen pound hammer. This adapts the plate to the model all over, overcoming shrinkage or change of shape. The plate is now ready to trim up and finish ready for arrangement of the teeth.

An aluminum base should be polished and completely finished before any vulcanite is added. If left till after vulcanizing the rubber may be unduly cut in the effort to grind out some spot in the much harder aluminum. A carborundum stone is better for grinding down than carborundum, as the latter clogs up too readily. Hall's abrasive disks are advisable for this purpose. Sand-paper on an arbor is sometimes used. Sweet oils and pumice stone used on a cork or wooden cone is more effectual for finishing down than pumice used on a felt wheel with water.

Just before placing the finished denture in the mouth, it should be dipped in a warm solution of caustic soda or caustic potash (a saturated solution if desired) and left for eight to ten seconds. It should then be removed and washed thoroughly in water containing a few drops of nitric acid, then rinsed in plain water. The aluminum is then coated with a lubricating mixture of bay rum and sweet oil, and every portion of its surface rubbed and burnished with an agate burnisher. This in addition to closing the microscopic pores of the metal toughens the base and gives it a more brilliant finish.

It sometimes occurs, in spite of all precautions, that the aluminum base does not have the desired adaptation when tried in for the bite. In this case, the base is used as a tray. Modelling compound is added very sparingly, and the adaptation corrected by the Greene method. This corrected base is poured with Spence compound. When sufficiently hard the base is removed and the modelling compound eliminated. The model and base are again placed in the putty swager and the fault corrected.

The patient should always be instructed how to properly care for

an aluminum plate. Soap has a tendency to leave a greasy film upon it, and has resulted at times in the complaint that aluminum is not cleanly. An aluminum denture should be brushed with common baking soda to keep it in good order.

1827 ELMWOOD.

THE FINISHING PROCESS OF ARTIFICIAL DENTURES

By T. G. HEALY, D.D.S., W. Newton, Mass.

One of the most important steps in the production of artificial dentures is the finishing process which is given them in preparation for their final use. Too much stress cannot be laid on this part of the workmanship for it is here that the dentist's finished product marks his ability.

In finishing dentures, the first step is the levelling of the surface which is usually done with scrapers and files for vulcanite, carborundum wheels and special files for metallic cases. This operation completes the "roughing down" of the denture and prepares it for its smoother finish. In vulcanite and celluloid the finer numbers of emery paper, numbers 0 and $\frac{1}{2}$ are employed, until all scratches or abrasions caused by the scrapers and files are removed. The best way to use the emery paper is in the form of emery paper wheels, which can be used with the chuck mounted on the lathe. This means a saving of time to the operator. Now we come to the vulcanite case ready for the coarser powders, such as pumice; these produce a surface which may be highly polished by the brushes which should follow the buff wheel. They should also carry the finer polishing powders or those used for the purpose of obtaining a high lustre, such as calcined buckhorn, when the case is of gold or silver, and whitening or prepared chalk when it is of vulcanite or celluloid. The use of pumice and lubricating oil in bringing the surface of the vulcanite or celluloid to a smooth finish is exceptionally good. It leaves the surface in a condition where a slight amount of polishing will bring it to its desired lustre.

Finishing powders are divided into two classes used for different conditions and serving different purposes:

Finishing Powders	{	Pumice	{	Used With a Lubricant
		Emery		
		Corundum Flour		
		Arkansas Powder		
		Tripoli		

Polishing Powders	$\left\{ \begin{array}{l} \text{Calcined Buckhorn} \\ \text{Rotten Stone} \\ \text{Prepared Chalk} \\ \text{Rouge} \end{array} \right\}$	$\left. \begin{array}{l} \text{Used} \\ \text{Comparatively} \\ \text{Dry} \end{array} \right\}$
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Among the buff wheels desirable for dental use are those made of felt, cotton, duck, leather, cork, disks of cloth, or chamois stitched together.

Felt is the universal material used and is probably the best, and if used in cones, round wheels, etc., will bring the desired results.

The case should now be free from all holes, however small, or porous openings, for it is here that harmful bacteria may lodge. Every point should be carefully inspected in order to find if there are any reposing places for bacteria. It has been found that pumice powder, with Castile soap and water as a lubricant, is the best preparation for the second step in the finishing of dentures. The final step for polishing vulcanite or celluloid is the use of prepared chalk. It is applied mixed sparingly, at first, with water or preferably alcohol on a soft bristle brush, until a high polish begins to appear, then it is dropped in a dry state upon the plate while in contact with the rapidly revolving brush wheel.

1479 WASHINGTON STREET.

POST GRADUATE COURSE

At the request of the School of Dentistry, Medical College of Virginia, and for a number of other reasons, the place of meeting of the annual class in Dental Prosthetics will not be Toronto, but the charming Southern city of Richmond, Virginia, a little over a night's run from Toronto. Following the increased amount of extraction of teeth as shown necessary by the X-ray and the resulting change in the sanitary and engineering aspect of these mouths, and the design of restorations for these, has led to a remarkable demand for information, especially as touching Partial Dentures.

Dr. W. E. Cummer whose lectures, demonstrations, and models in Partial Dentures are exceptionally complete, and embrace some fundamentals in design, new to many, is under arrangement to present this subject in Salt Lake City, Utah; Portland, Oregon; Spokane, Wash.; San Francisco and Los Angeles, Cal., before meeting the class in Richmond, Virginia. The course in Richmond will be given from August 14 to 26, and will be an opportunity for those interested in the Prosthetic side of Dentistry. Those interested would do well to communicate with Dr. J. A. C. Hoggan, 114 North Fifth Street, Richmond, Va.

SELECTION OF TEETH

BY N. L. ZIMMERMAN, D.D.S., PORTLAND, OREGON

In presuming to present anything upon this very important phase of dentistry, I realize that I cannot add much to what has already been contributed by those geni of our profession who have so blessed edentulous humanity in the last few years.

The dental profession of the last fifty years has been alive and growing rapidly, and I am not far wrong when I say that dentistry, in that time, has risen from the ranks of the trades to a distinctively scientific profession, and in no department of dentistry has there been made greater advances than in the department of Prosthetic Dentistry. It is indeed a long way from the crude prosthesis of the ancient Egyptian to the laboratories of our friend, Dr. Gysi, and his disciples, and much has been learned and lauded, and later discarded along the road. Changes come so rapidly and are so radical that many of us are in a fair way to be relegated to the scrap heap unless we follow the times very closely. For instance, it is rather startling for those of us who have so devoutly pinned our faith to the "Temperamental" forms of teeth to have our theories shattered to bits by a bomb of carefully culled facts hurled by such as Dr. J. Leon Williams. Nor is the end yet, for surely the beginning has only been made and the next few years are to revolutionize our ideas of anatomical articulation. Those of us who have been privileged to own and operate the "Gysi Adaptable," and are learning to select our tooth forms according to the teaching of Dr. Williams, are beginning to see a great light and the to-morrow of prosthesis looks rosy indeed.

Let us now turn our attention to that step in the construction of an artificial denture which is, I think, the point where so many of us have erred in the past, namely the selection of teeth to fit the individual case.

How many of us during our career as dentists have labored to secure beauty and esthetic harmony between our dentures and the general facial make-up, and yet when we were through the results were most disappointing. Many times I have hunted through tooth forms and moulds to secure teeth suitable in form and color to meet the case, and yet my results looked "Artificial," and I must say that, in my opinion, a great advance has been made with the introduction of Trubyte teeth. Certainly much is due those gentlemen who have labored so earnestly to secure tooth forms which harmonize with the face forms and to give them shades which blend with the face colors.

Dr. Williams' efforts in showing us the fallacy of the temperamental theory and that to produce harmonious results we must study the contour

of the face, have changed entirely our methods of selecting the moulds of teeth. However, like all radical changes we have to make our applications with considerable care and study, as I have found that it is not an easy task always to decide just what type of face I have under consideration. Many faces present different outlines when viewed at various angles, but even at that I have gotten much more satisfactory results than by the temperamental guesswork.

In studying facial outlines, I have been struck with one thing most forcibly, and that is that Nature herself seems to have lost her skill in the selection of teeth for certain individuals, for I have examined several cases where a long square tooth was placed in a tapering face—in fact the writer himself seems to have been a victim of just such an error. And right here I have experienced the difficulty, which most of us have encountered, of having edentulous cases presented in which the patient insists upon a tooth form simulating the lost natural ones when the result would be the incongruous mixture I have alluded to. The handling of these cases requires considerable explanation on our part, but the results will inevitably bring you the patient's gratitude as well as your own satisfaction.

Another thing of which a great many of us have been guilty, is the almost universal practice of selecting our teeth from the model instead of the bite plates. I consider the time spent in properly making and marking bite plates to be the most valuable part of tooth selection, for it yields a simple and exact pattern of the arch outline which the teeth must occupy and it is a very simple procedure to measure on the bite plate the length of the centrals and the space which the teeth must occupy, and order the teeth from these measurements. The most confusing part of this will be the location of the second molars, but this will be greatly facilitated by measuring an appropriate distance from each maxillary tuberosity. Some prosthetists are now adopting the method of making the trial plates directly from the impression when the impression is made in modelling compound according to the Greene-Supplee method. This method has the advantage of being quicker, yet I think the results are not likely to be so accurate. I prefer to make the trial plates on a vulcanized base plate and to make the markings directly upon the wax, thus obviating any chance of wrong measurements later when the teeth are mounted. It may seem a waste of time to some to perform the double vulcanization, but unless the trial plates are made from the modelling compound impression, it is next to impossible to get perfect results without the rigid base plate.

The study of tooth colors is probably the part of tooth selection in which we have had our worst troubles. Those of us who have attempted

tooth restoration with the baked porcelain inlay or any of the plastic enamels or porcelains have all had to go through a lot of disappointments before we would learn that a tooth is not the same color from the incisal or occlusal tip to the neck, and as I have studied the color of teeth I think Nature has more than redeemed her mistakes in form with the beauty of the tooth shades. Certainly the blending of the bright lights of the incisal third with the softer colors of the remainder of the tooth until it fairly merges into the full red of the lip, is worth our study and consideration in reference to our selection of teeth for artificial dentures. How many of us have had Mrs. Smith say, "I do hope my new teeth won't look like Mrs. Jones', for her teeth just look like tombstones." Certainly they look like tombstones for they were the same color from the incisal tip to the neck, and contrasted with the dark shades of the lips they were very prominent. Fortunately manufacturers are now furnishing us with a tooth the colors of which in a measure simulate the shadings of natural teeth, and it remains for us to use care in our selection.

Nature is a wonderful provider; she has made man an omnivorous animal and has given him the teeth of the dog, the squirrel, and the cow, so that his foraging for food may be easy. The study of Comparative Dental Anatomy is very fascinating, and the study of tooth forms in relation to the functions they are to perform is of the utmost importance. Each tooth has its own separate part to play in the masticatory act, and in the making of artificial teeth we have tried to simulate nature as nearly as possible, and this is as it should be; but we have forgotten that the action of our teeth is purely mechanical, and that the mechanics of a natural tooth firmly imbedded in the natural tissue are vastly different from the mechanics of an artificial tooth mounted upon a plate. Consequently some variation must be made from the natural teeth in our construction of artificial ones. We have all heard a great deal in the last few years about "Three Point Contact," and "Anatomical Articulation," and I think that most of us have made honest endeavors to produce the "Three Point" work in our practice. However, in getting this result it becomes necessary to grind each individual tooth a great deal, and personally I have wondered why it was necessary for the manufacturer to attempt to reproduce natural cusps and sulci in his tooth moulds when we immediately proceed to grind away all his efforts. Certainly there must be some other way to achieve proper articulation, and in part this has been solved, as far as I am concerned, by the use of Trubyte Molar Blocks. However, I still have not arrived at the point where I can set up a full denture to my satisfaction without some grinding.

The study of tooth selection has been given only recent thought; we have been content to place teeth in our patients' mouths which we knew

were an outrage against efficiency and beauty, and we have excused ourselves with the thought that the manufacturers were at fault. In a measure this is true, but manufacturers make only that which people buy, and just so long as we do not demand a better article we need not expect the manufacturer to produce it. A dentist's relation to his patient is twofold. He must be a mechanic of the highest order, but that is not all, he must be an artist as well. Only by making his work both efficient and artistic can he best serve his patients.

TO SEPARATE GOLD FROM PLATINUM

By S. M. MYERS, D.D.S., WACO, TEXAS

This article is a comment on V. C. S's answer to the question asked by C. B. K. in the February DIGEST, and in order that our readers can better understand Dr. Myers' article in answer, we reprint the question and answer as given in the DIGEST.

Dr. Myers' letter to the Editor and his method of separating gold from platinum follows.

Question.—Will you please give me a simple method of employing the aqua regia-ferric process of separating gold or gold alloy from platinum?—C. B. K.

ANSWER.—Answering your question on how to separate platinum from gold alloy. First add silver to reduce alloy to 6k. Dissolve silver and copper with nitric acid and wash residue thoroughly in water. Dissolve residue, which should now be pure gold and platinum, in aqua regia (one part hydrochloric and two parts nitric acid). Precipitate gold with sulphate of iron. Filter and wash. Precipitate platinum with solution of ammoniae. Filter and heat in crucible to white heat, just burning filter paper out. This when cool gives you sponge platinum which had best be sent to a platinum refiner to melt and roll.—V. C. S.

Editor THE DENTAL DIGEST:

In the February, 1916, issue of *The DENTAL DIGEST*, V. C. S's answer to C. B. K., telling him how to separate platinum from gold, is entirely wrong. C. B. K. would lose all of the platinum, by the method outlined, unless his gold to be refined contained over ten per cent. platinum, by weight, which over-plus of platinum remaining, and gold residue would not be dissolved by the combination of acids he gives.

Yours very truly,

Waco, Tex,

S. M. MYERS.

All gold scrap must first be "parted" by either the nitric acid process or the sulphuric acid process, before being further refined by the aqua regia process, which process is used only when chemically pure gold is to be obtained. The separation of gold from platinum is effected by the nitric acid process. Parting by the sulphuric acid process does not remove the platinum at all; then it is, that the aqua regia process is necessary for the removal of the platinum.

When parting by the nitric acid process, the amount of gold in the scrap to be refined must be at least ten times that of the platinum, by weight. If there is less than this proportion of gold, more gold must be added to bring the proportion up to ten times the amount of platinum, as, with a smaller proportion of gold, all the platinum would not be removed, and a second parting would be necessary. There may be any amount of gold over this proportion, but the least amount of gold must be ten times that of the platinum in the alloy.

I take it for granted that C. B. K. has the proper outfit, clay or graphite crucibles and a Fletcher injector furnace, for melting the gold. They are necessary; also, a pair of crucible tongs.

The gold scrap must be cleared of all loose particles of base metals, and of all porcelain facings and portions of cement. Weigh the gold, and record the weight, and if more gold has to be added, do so, and record its weight. All is now ready to be charged into a well boraxed crucible and melted. When thoroughly melted, add small portions of potassium nitrate (saltpetre), to the charge, from time to time, during the next twenty or thirty minutes, keeping the charge in a molten condition all this time. The potassium nitrate oxidizes any of the base metals that may be alloyed with the gold. Small additions of calcined borax should be made to the charge during this time to dissolve the oxides as they form.

Now add to the charge an amount of silver equal to two and a half times the original weight of the gold scrap. This silver may be pure, Mexican coin, or sterling. If Mexican coin, test for counterfeits; if sterling, examine for, and remove, all portions of soft solder that might be found attached. This soft solder is composed of tin and lead, which, if melted with the gold, would contaminate it. Mexican coin silver is about the cheapest and safest to use. As soon as the silver is melted, stir the charge well with a stick of carbon or a stem of clay, previously heated quite hot. Never stir with an iron rod.

Have a wooden or enameled bucket with a capacity of about four gallons, filled with water of ordinary temperature, and placed near by on the floor. When ready, with a pair of crucible tongs lift the crucible out of the furnace, and, with a gentle circular movement, pour the molten charge in a small stream, into the water. When the metal strikes the

surface of the water, it is broken up into many flakes and hollow spheres, exposing large surfaces for the acid to attack.

Now pour off the water, collect all the granules, and dry them. In order to insure a thorough mixture of the silver with the gold, a second melting, stirring, and granulating is necessary. Collect the granules a second time, and boil them for fifteen or twenty minutes in clear water, in order to dissolve particles of flux and slag, which are alkaline, and, if left with the granules, would neutralize the nitric acid to a variable extent. The alloy must now be washed with some distilled water.

Place the granulated alloy in an evaporating dish and cover with nitric acid of specific gravity 1.32. Each ounce of granulated alloy requires about two ounces of nitric acid for the parting. Place the evaporating dish on a sand-bath, and apply heat from beneath. This should be done by an open window with an outward draft, or in an open fireplace, or under a flue, to allow the poisonous fumes to escape.

When the proper temperature is reached, brown nitrous fumes begin to rise, showing that the "parting" process has begun; and they continue to rise till the acid has become saturated with the silver, platinum, copper, and other alloying metals, in the form of nitrates. When the fumes cease to rise, pour off the liquid into a glass or porcelain vessel and save it. The residue in the dish must now be covered with fresh acid, and the process continued till no more fumes are given off, when the liquid is poured off as before, and a third addition of acid, not so much as before, is made. This is allowed to boil for twenty minutes, or till any brown fumes cease to rise, when it is poured into the other nitrate solution.

The brown residue in the dish is gold, almost pure, and must now be washed a number of times with boiling distilled water, to remove all the nitrates remaining with the gold. These washings should be poured into the former nitrate solution. Only distilled water should be used for this purpose. The gold may now be transferred to a filter paper in a funnel, and washed several times with hot distilled water, till no white precipitate is shown when a few drops of hydrochloric acid are added to a small portion of the filtrate in a test tube. The gold may now be dried and melted, and cast into an ingot.

The washings should be added to the nitrate solution, as they contain silver and platinum, which are to be recovered. Add to the solution of nitrates three times its amount of distilled water, and filter. Pour the filtrate into a large glass or porcelain, not enameled, dish, and add a number of pieces of copper plate or wire. A gray precipitate is seen at once, which is the silver and platinum being thrown down, as a mechanical mixture. Occasionally stir the pieces of copper with a glass rod, and, after a few hours, all of the silver and platinum is precipitated, which is

determined by adding a few drops of hydrochloric acid to a small amount of the liquid in a test tube, when no white precipitate should be seen.

The gray precipitate in the bottom of the vessel is mainly silver and platinum, as a mechanical mixture. Pour off the liquid and remove all the pieces of copper. Wash the precipitate about twice with hot distilled water, and pour off. Transfer the precipitate to an evaporating dish of suitable size, and add nitric acid three parts, distilled water one part, enough to cover the precipitate. Place on the sand-bath and heat. The acid dissolves the silver and other metals that may be precipitated with it, except the platinum, which remains untouched, and appears in the bottom of the dish as a finely divided, jet black residue. Add distilled water to dilute the nitrate solution in the dish, and filter. The finely divided platinum is caught on the filter paper. This is now dried, and the paper, with the platinum, is put into a porcelain capsule and heated to a white heat. The platinum sponge may be melted in an oxy-hydrogen furnace.

The silver may be recovered from the filtrate by precipitating it with the copper plate, and, if all the pieces of copper have been removed, the silver should be of very high grade, and is pure enough to be used again for "parting" purposes.

If *pure* silver is desired, pour the filtered solution into a porcelain dish or into a Florence flask, and add slowly a saturated solution of sodium chloride—C. P. hydrochloric acid may be used—stirring or shaking well after each addition. Continue to add the salt solution till no white precipitate is thrown down. As soon as the operation is completed, the chloride settles to the bottom as a thick, heavy curd, and any excess of salt solution will dissolve the chloride, making the super-natant liquid cloudy; when this stage is reached, no more salt solution should be added, as the chloride is dissolved in an excess of salt solution.

Now drain off the super-natant liquid, and wash the chloride with hot distilled water till the wash-water does not show blue tint when aqua ammonia is added to some of it in a test-tube. This blue tint shows the presence of copper, and the main object of these washings is to remove this copper. Continue the washings two or three times after the ammonia test shows no blue.

Transfer the washed chloride to a glass or porcelain dish, and cover it with hot distilled water containing 5 per cent of hydrochloric acid, and put into it iron nails—count them—and stir often. The white chloride turns to a dark gray, which is metallic silver. When every particle of the chloride has turned dark, remove the nails, counting them, to be sure that none are left in the silver. Wash the silver a number of times with hot d'stilled water containing about 15 per cent. of hydrochloric acid.

This is to free the silver of iron. If the chloride and silver have been carefully washed, the resulting silver will be what is called *pure* silver.

If one wishes to obtain *chemically pure* silver, and has only a small quantity of chloride—larger quantities may be divided—it may be done as follows:

Dry thoroughly the washed chloride, and mix with it about three times its weight of sodium carbonate. With this, fill a well boraxed crucible about one third full, and cover the charge with powdered charcoal, and reduce in the furnace till no gas is given off, when the operation is complete. Do not fill the crucible more than one third full, as much gas is evolved during the operation.

If large amounts of chloride are to be reduced to metallic silver, electricity must be used. This method, too, gives chemically pure silver, and is used by the Royal Mint, London, England.

PROFESSIONAL DISCOURTESY

A writer who signs his article "G" in the *Medical Economist* of April includes the paragraph reprinted below. If he knows no more about other subjects he writes upon than he does about how dentists get their education, his articles are worth little to anyone.

Perhaps he might broaden his view by sometime dropping in upon a dental convention and see men who have traveled long distances at their own expense, to broaden their knowledge.—EDITOR

"Where, save in medical circles, do men travel long distances, and sacrifice time and money to attend scientific meetings, to get perchance some small increase in knowledge and usefulness? Where else do men so eagerly seize any chance, even at great cost to themselves, to improve their scientific acquirements? I have often sat at the back of the hall in a crowded medical meeting, and watched the tired practitioner, who ought to be enjoying or resting himself, fight sleep in his endeavor to improve his medical qualifications. And these are not beginners, tyros alone, but many men who have spent half a lifetime, or a whole one, in the study and practice of their profession. Do lawyers or ministers or dentists or architects or engineers do this? No, indeed; they may and do learn much after they graduate and get licensed to pursue their avocations; but they learn in the course of their life's work, and get paid whilst doing it. Here are men who go through as much or more than those in any other calling before they attain full professional stature; and lo! they remain students and searchers after knowledge until they die."

Editor DENTAL DIGEST:

The article by Dr. Barker in the April issue of the *DIGEST* (page 249) is the most helpful thing of its kind you have published recently. Helpful both to the dentist and to those of his patients who are having their first experience with artificial teeth.

We all know that plate-work, that is that part of it that concerns the fitting and adjusting of vulcanite plates in the mouth and the necessary difficulties that occur in the early manipulation of such foreign bodies by the unskilled patient, constitutes a prolific source of trouble for the average dentist.

Trouble with artificial teeth probably makes up the greater per cent. of "come-backs" with which the average practitioner has to deal and is no doubt the reason so many avoid that part of prosthetic dentistry as much as possible.

I do not claim any special ability in plate-making and plate-fitting, perhaps will run a pretty fair average, but from experience, at whose school alone some of us have to learn, I have evolved a short talk or lecture that I give to every patient in whose mouth I am fitting a new plate and in it I cover the usual difficulties that occur in the first few weeks' experience of learning to handle the proposition. In the first place, you want to fully agree with the patient that the plate is going to feel very awkward, clumsy and bunglesome, even going farther than the patient in commenting on the exceeding awkwardness that the plate will cause to be felt at first. When they find they can actually keep them in the mouth and that they are not such a very great inconvenience after all, the reaction will be in your favor. Carry them through the successive steps of trying in to see if they produce pain at any point, adhesion, articulation, enunciation, etc., explaining in detail and plain language each successive step, always holding out the idea of present awkwardness but future comfort and service. Calling attention to the fact the thousands and thousands of people have been and are wearing artificial teeth with great satisfaction, and that all have had the same experience in learning to wear them, reminding them of how strange their mouth felt when they lost a tooth, and now they have 14 new teeth, beside the rubber all at once, to contend with, and remarking on the fact that you know they have strength of mind and determination; all this helps to give them the needed confidence.

I find that since giving this lecture or running fire of comments as I fit the plate, that my patients start off with an increased confidence and there are markedly fewer "come-backs" for adjustment in the first few days of their new experience.

D. W. H.

A "SLAM" OR AN EARNEST PROPOSITION

The article on extraction of teeth, by E. L. Teskey, in February, 1916, DIGEST (page 118), has been read and reread by me, to determine whether it is a joke to "Slam" some one, or a really in earnest proposition. I would say that from a practical standpoint, it is very much of a joke. I have administered anesthetics—ether, ether and chloroform, chloroform, somnoform, and gas and oxygen, over thirty thousand (30,000) times. This represents perhaps 30 per cent. of the number of people for whom I have extracted, anywhere from one to 32 teeth each, including many impacted inferior 3rd molars. I never have yet deemed it advisable to send a patient away until the next day, and never thought it necessary to physic a patient before extracting. I never had a patient infected from extracting, but have operated upon many jaws, which had become necrosed by "leaving" teeth over night and longer, when they were in an abscessed condition. I have had many hundreds of cases, where, had the patient returned home, to "call again to-morrow," they would have wound up in the hospital or morgue. I find, from my limited experience, that when a tooth is found to be incurable, the quicker you can remove it, the better.

In our valley, with between two and three hundred thousand people, 85 per cent. belong to the working class, who have no fancy prices to pay for the extraction of a tooth. I extract for hundreds every year, who have no money for such operations, but they get just as good treatment as anyone, and don't get physicked and sent home. It is all right to carry fads on paper, but you would have some time in getting patients to return day after day to have sockets cleaned out, when perfectly comfortable, and which would, in a great majority of cases, add to the inflammation.

We have dentists and physicians too, who object to the extraction of a tooth, while the face is swollen. Such a proposition is not even rational, and those fellows are the ones who generally give essays on how to extract teeth, and "groom" the patient in preparation, and pull their legs afterward.

I have operated on cases from all along the line, from New York State, to New Jersey via Philadelphia, and *am not guessing*. You are probably wearied by this time, so must stop. It would take a large volume, to go over in detail, the cases brought before us, after the anesthetic methods have been adopted, and the results not as had been expected.

W. S. K.

ANSWERS TO "PERPLEXED"

Answer No. 1

Perplexed in April DIGEST (page 220), asks for formula for cleaning impression trays. I suppose he means how to remove modeling compound that sticks to them.

After removing the excess by any means one wants to employ, take a pledget of cotton the size of the end of the thumb saturated with chloroform and rub over tray. This repeated a time or two will clean the tray as bright as new.

Another thing that might be of benefit to some is the following. Measuring wire that we like best, we make by taking about three feet of electric light wire, the kind used for drops, untwist it and burn the insulation off by passing through the Bunsen flame. This leaves about a dozen small copper wires. Separate these and wind on a spool. This copper wire is more pliable and easier to work than the regular measuring wire.

W. W.

Answer No. 2

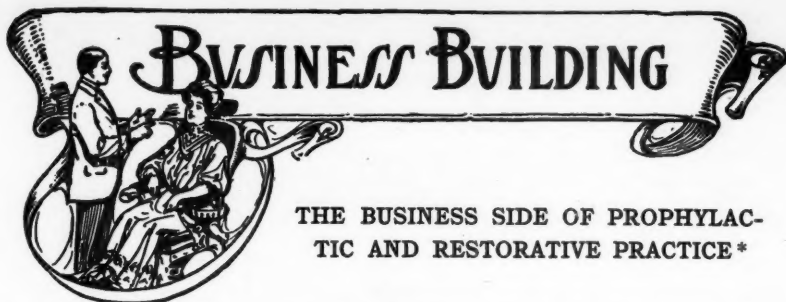
The inquiry of "Perplexed" does not specify whether it is wax, plaster or compound that is to be removed from impression trays but since wax and plaster are easily removed by hot water, I assume it is compound that bothers him. The remedy is to remove the compound from the tray before filling the impression and thus avoid mutilating the tray and the adhesion of compound and plaster. This may be done usually very easily by two or three light taps with a stick of wood or horn mallet *upon the edge of the handle of the tray*. If the tray is old and battered it would probably not be so easy as if it were new and smooth. I have aluminum trays that have been in use ever since aluminum trays were introduced and there is not a dent or scratch upon them. Never put a tray containing a compound impression into hot water, for it sticks the compound to the tray and it is difficult to remove it. If it is a plaster impression it may be filled up before removing from the tray but do not pound the tray to separate the model. First remove the tray as per above and then pound the plaster.

D. W. B.

Answer No. 3

In reply to the question of "Perplexed" in the April DIGEST for a formula for cleaning impression trays—gasoline does it. I immerse my trays that have impression compound sticking to them in a can of gasoline over night or till I need them again, compound can then be easily brushed off. I have a crisco can which has a tight cover, and I use the gasoline repeatedly.

L. R.



THE BUSINESS SIDE OF PROPHYLACTIC AND RESTORATIVE PRACTICE *

BY W. F. SPIES, D.D.S., and GEORGE WOOD CLAPP, D.D.S., NEW YORK

Those of you who have examined the tables of "Average Cost of Operations" beginning on page 201 of "Profitable Practice," may note some apparent discrepancy in the costs of operations, as given here and given there.

This discrepancy is apparent, rather than real. It arises because in this series of articles, begun more than a year ago, the fees for an entire Class of practices (in Class III, all practices between \$3,000 and \$3,999) are used as a base, while in "Profitable Practice," the fees are based on much finer subdivisions of practice.

This article concludes this series.—EDITOR.

CLASSIFICATION OF CROWNS

FOURTH PAPER

The crowns are classified as Richmond, all porcelain, porcelain with gold base, gold shell crowns, either partly or wholly cast or swaged and extensive occlusal restorations by inlays with pins which take the place of crowns for abutments.

TIME REPORT:

1. Crown or Root prep.	4. Bite & Imp.	7. Number of cases
2. Fitting Band	5. Laboratory	8. Average time
3. Adjust Dowel and Cap	6. Setting	9. Average material
		10. Average cost

Average time required for shaping anterior roots, fitting and setting porcelain crowns, 1 hour and 15 minutes. 58 cases from 25 dentists.

Average cost, exclusive of crown as follows:

	Class I	Class II	Class III	Class IV	Class V
Minimum hourly fee	\$1.45	\$2.22	\$3.13	\$3.94	\$4.89
Average cost	1.85	2.77	3.91	4.92	6.11

Banded and half banded porcelain crowns. 29 cases from 1 dentist.

Complete, average time, 4 hours and 10 minutes. Average cost, except precious metals and crown, as follows:

	Class I	Class II	Class III	Class IV	Class V
Minimum hourly fee	\$1.45	\$2.22	\$3.13	\$3.94	\$4.89
Average cost	6.04	9.25	13.04	16.41	20.37

*This article began in the January 1916 number, and was continued in the February and March issues.

Porcelain crowns with cast base. 4 cases from 1 dentist. Average time, 3 hours. Average costs, exclusive of precious metals and crown, as follows:

	Class I	Class II	Class III	Class IV	Class V
Minimum hourly fee	\$1.45	\$2.22	\$3.13	\$3.94	\$4.89
Average cost	4.35	6.66	9.39	11.82	14.67



Illustration No. 6

Richmond crowns, 22 cases. Average time, 3 hours and 40 minutes.

	Class I	Class II	Class III	Class IV	Class V
Average cost	\$5.31	\$8.14	\$11.47	\$14.42	\$17.91

Fitting and setting bicuspid porcelain crowns. Average time 1 hour and 10 minutes.

Average cost	\$1.69	\$2.59	\$3.65	\$4.59	\$5.70
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Cuspid gold crowns. Average time 50 minutes.

Average cost	\$1.21	\$1.85	\$2.61	\$3.29	\$4.08
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Bicuspid gold crowns. 63 cases from 50 dentists. Average time 1 hour.

Average cost	\$1.45	\$2.22	\$3.13	\$3.94	\$4.89
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Illustration No. 7

Molar gold crowns. 141 cases from 60 dentists. Average time 1 hour and 25 minutes.

Average cost	\$2.05	\$3.14	\$4.43	\$5.58	\$6.93
------------------------	--------	--------	--------	--------	--------

Treating molar teeth and making molar gold crowns, 40 cases, 30 dentists. Average time 3 hours and 10 minutes.

	Class I	Class II	Class III	Class IV	Class V
Average cost	\$4.59	\$7.03	\$9.91	\$12.47	\$15.48

The average cost of gold in 1,000 swaged crowns, soldered or seamless, was \$1.00. The average cost of gold in 1,000 bicuspid and molar crowns with cast tops was \$2.25.

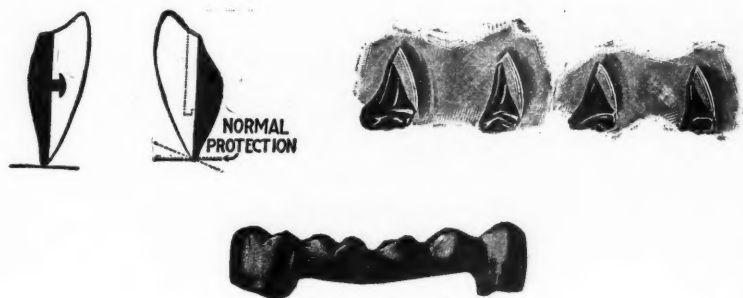


Illustration No. 8

CLASSIFICATION OF DUMMIES

The dummies are classed as Pin Facing Dummies, Steele's Facing Dummies, Occlusal Surface Gold Dummies.

TIME REPORT

1. Grinding facing
2. Adapt. backing
3. Soldering or casting
4. Number of cases
5. Average time
6. Average material
7. Average cost

(Anterior and Posterior Dummies)

1. Waxing and carving
2. Investing and Casting
3. Number of cases
4. Average time
5. Average material
6. Average cost

(Occlusal Surface Gold Dummies)

A BASIS FOR COMPUTATIONS

The only basis upon which the cost of any operation to any practice can be determined with sufficient accuracy for it to serve as the basis for just fees, is a sufficient number of time-records of the several steps comprising the operation, so that when a case presents for estimate, the dentist can see that a number of operations requiring those steps have averaged to cost him at least a certain sum. The necessity for itemizing steps arises from the fact that operations similar in general principles often differ in such important details as to materially affect the cost, such as degrees of accessibility in cavities, chronic abscesses, etc. The following forms have proven satisfactory for making records and they are here presented in the order of use, beginning with the first appearance of the patient.

The Consultation Chart affords a simple means of noting the various conditions which may be present. If there is an impairment, as for example, inflammation about any of the teeth, an X is made opposite and

CONSULTATION

Mrs. John Doe Date *Aug 1* 191*5*

Deposit	X
1. Crown	X
2. Root	X
Inflammation	X 3-5-14-30 very marked
Bleeding	X 3-5
Pain	X 3-5
Swelling	X 3-5-14-30
Pus	X 3-5-14-30-27-25-19-18-7
Abscess	X 5
Fistula	X 5
Gum receded	X 3-5-14-30-25
Sensitive	
1. Heat	
2. Cold	
Mal-occlusion	X 7-27
Excessive stress	X 7-27-3-5-6-14-30
Teeth loose	X 5-14-30-7
" to be extracted	X 5
" absent	X 4
Crowns	
1. Gold	X 5-14-30
2. Porcelain	
Inlays or fillings	
Bridges	X 4-5
Plates	
Patient suffering with	
pyorrhea	X indefinite history
Treatment	X none
Last visit to dentist	X 3 mos ago
Care of mouth by patient	X good
General Health	X very good

Remarks *Time 1:10*
Impressions for study models
Crowns 5-14 to be removed overhanging edge
of bands, excessive stress.
Referred by John Smith.

The Consultation Chart used by Dr. W. F. Spies, filled in with a pencil for a practical case. The information is later posted to a similar form on one side of the Permanent Record Chart, and this chart is destroyed.

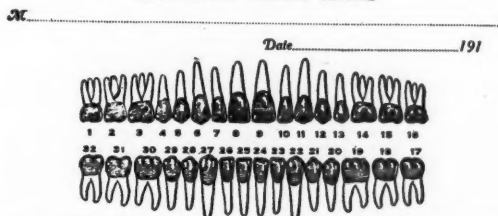
Illustration No. 9

the tooth number written at the side. Any special remarks can be written below in the space provided for that purpose. Frequently, however, it becomes necessary to utilize the back of the Chart for further notations. At a later time, the information on the Consultation Chart is transferred to the Permanent Record Chart.*

*See page 442.

Figure No. 14 shows the contract form, giving the date, amount of fee and how it is to be paid, also what the fee is to include, with any special remarks in the space provided. The terms are later to be posted on the Permanent Record Chart.

INDIVIDUAL CHAIR CHART



Operation	Details	Tooth No.	Time		Debit		Credit	
			Hrs.	Min.	\$		\$	
Examination								
Time In								
Time Out								
Prophylaxis								
Pyrorrhea Treat.								
Root Canal Treat.								
" " Fill								
Inlay								
" Cav. Prep.								
" Wax Model								
" Impression								
" Bite								
" Matrix								
Gold Filling								
Amalgam "								
Cement "								
Crowns								
Preparation								
Fit Band or Coping								
Gold								
Porcelain								
Bridge								
Partial Impression								
Full "								
Taking Bite								
Extraction								
Plates								
Splints								
Orthodontia								
Miscellaneous								

REMARKS:

This Chart may be filled in for each patient, and the totals entered in the Permanent Record Chart at any convenient time. Designed by Dr. W. F. Spies.

Illustration No. 10

When work is begun, the "Individual Chair Chart" and the "Individual Laboratory Chart" are used as required, noting the character of the work and time. When these notations upon them have been posted to the Permanent Record Chart, they are destroyed.

as shown in Figure No. 12. This avoids the use of memory or the possibility of confusing charges and credits.

Time stamps form an easy means of keeping accurate records of elapsed time on operations or parts thereof for those who do not care to watch the clock.

Case No. _____ **MATERIAL** Operator _____

Date _____ Dr. Cr.

	DWT.	GRS.	COST	DWT.	GRS.	COST
24 K. Plate (Gold)						
22 K. Plate "						
20 K. Plate "						
Fall "						
22 K. Scrap "						
22 K. Solder						
20 K. Solder						
18 K. Solder						
Pl. Ir. W.						
" " 12 gauge						
" " 14 "						
" " 16 "						
" " 18 "						
" " 20 "						
" Wire						
" Plate						
Teeth						
Total						

REMARKS.

PRECIOUS METALS AND TOOTH RECORD

Charge the work with all precious metals taken from stock for it and credit all returned to stock from it. Charge the patient's account with the difference. Designed by Dr. W. F. Spies.

Illustration No. 12

The Permanent Record Chart summarizes the records made on the other cards and forms the ledger account of the patient. It might be thought that with the use of this card, no others would be necessary, but experience shows that the records on the Consultation Chart, Individual Chair Chart and Individual Laboratory Chart are roughly made, usually in pencil, and that it is better to use them in that way and then post carefully in ink to the Permanent Record Chart.

circumstances, they make better patients and the relations between patient and dentist are more satisfactory.

FACILITATES COLLECTIONS

A most important advantage resulting from such a system and the proper keeping of its records is that it goes far toward settling the problem of collecting fees, in some cases a serious matter. It is the consensus of opinion among all who have tried, that the time to arrange for the collection of the fee is when the fee is named. Naming the fee in advance gives

Mr.	Referred
.....	Dr.
.....	
<hr/>	
To include:	Date
Prophylaxis	Fee \$
Pyorrhea Tr.	Paid by
Splint	Treatment
1. Temporary	Weekly
2. Permanent	Retainer
	Amount
Remarks:	Clinic

The Contract Form

Illustration No. 14

the patient who cannot afford the work, a chance to decline or to make arrangements for payment. It reduces the number of instances in which payment is delayed. In other words, the best way to avoid bad debts is to have a definite understanding with the patient as to the amounts and times of payment before work is begun.

MAKING ADVANCE ESTIMATES

The question is often asked: "How can I estimate in advance what work will cost?" The answer is simple. Until a dentist has detailed records of the time required for the various operations, he must estimate from his general impressions of the amount of time required. Experience shows that these general impressions overlook many details, and that estimates of time and material are usually too small. The fee based on the estimated time is usually insufficient for the time actually required. Dentists who do not care to make time records are advised to use the tables in "Profitable Practice," from which the time records are taken.

THE SUCCESSFUL PRACTICE OF DENTISTRY*

BY WALLACE SECCOMBE, D.D.S.

*Professor Preventive Dentistry and Dental Economics, Royal College of Dental Surgeons,
Toronto*

GENERAL OFFICE MANAGEMENT

One of the most common mistakes is to make too many appointments during the day. Many men cling to the half-hour appointment plan instead of adopting the hour basis for appointments. In place of fourteen patients in the day, the general practitioner should receive one-half that number. The reception of a patient, removal of wraps, sterilization of instruments, adjustment of operating chair, preparations of operator, obtaining history of case since last treatment, the preparation of the operating room for next patient, with the few passing words of greeting and farewell, that the ordinary amenities of life demand, consume, at the lowest estimation, five minutes at either end of each sitting. This means ten minutes for each patient, and if appointments are made for seven more patients than are necessary, the total loss of time each working day is seventy minutes. This, in effect, is just the difference between leaving the office at five o'clock rather than ten minutes past six.

Furthermore, the half-hour appointment plan makes it almost impossible to overtake the schedule, following any unavoidable delay. This usually results in a number of patients waiting in the reception room, and this, in turn, diverts the attention and interest of the operator from the work in hand. His mind attempts a solution of the problem of how to get these three or four patients out of the office in the least possible time, but before he accomplishes his design yet another patient may arrive, and so the process continues, with loss of time amounting to many hours in the aggregate, and no single case appreciably advanced toward completion. This, in a word, tells the story of a simple inlay restoration, taking six sittings to complete, extending over a period of six weeks of time and a fee of six dollars. Result—waste of patients' time, and a direct financial loss to the dentist, who cannot honestly charge more than the service would have entailed if carried to a conclusion in the most expeditious way. The habitually crowded reception room indicates a lack of good management and is all too prevalent. In dental offices where the most work is accomplished there is no sign of

*This article was commenced in the May Digest.

crowd, rush or hurry. These symptoms manifest themselves in the offices where gross receipts are correspondingly low.

A fixed consultation hour from four to five is a decided advantage, being available for examinations, short treatments, and consultations. A fee should, of course, be charged for consultation in those cases where the treatment is not proceeded with.

Another important consideration is the proper and sufficient ventilation of the office and the maintenance of the atmosphere at a fixed temperature. This point should be that degree of heat which will enable the operator to work at his highest point of efficiency. This will be found to be many degrees lower than that which prevails in the average office. Thermometers are cheap. Place one in each room and make it the duty of your assistant to see that plenty of fresh air enters and a fixed temperature is maintained. This degree may be too low to keep certain patients comfortable, but in such cases the use of a steamer rug, thrown over the patient, will overcome this difficulty. Fresh air in the office will not only increase and improve output of service, but is also a decided factor in the maintenance of the dentist's greatest asset, namely, good health.

PREVENTIVE DENTISTRY

In rendering the best possible service we must practise all that is known of prevention. The dental profession is constantly urging the claims of oral hygiene as a health measure, and in the profession's public oral hygiene propaganda, prevention plays a very important part. Does the average dentist practise personal oral hygiene? What would an examination of the mouths of the dentists in this room disclose? Do we practice oral prophylaxis for our patients, or just clean those surfaces of the teeth that are practically immune and that the patient can see? Does prophylaxis mean to us the polishing of those surfaces of the teeth that are most susceptible to caries? Are we in earnest? Do we really practise what we preach in regard to prevention?

No crown, bridge or other restoration should be put in place until the patient has acquired the habit of proper daily care of the mouth. How much greater will be public respect for dentistry when patients are told that a crown or bridge or other restoration will not be inserted until sufficient knowledge has been acquired by the patient to intelligently cleanse the mouth and sufficient interest shown to perform that duty with regularity.

A system designed for the periodic notification of patients to return for dental examination is essential to the effective practise of preventive measures. The plan usually followed is for the office assistant to

fix an appointment when the pre-arranged date is reached. An appointment card somewhat as follows is then issued and sent to the patient;

*The enclosed appointment has been made
in compliance with your request for regular
dental examination and treatment.*

Only patients who clearly understand the motive prompting such a plan should be included in this service, and only then at the specific request of the patient.

PAINLESS DENTISTRY

No dentist can honestly promise to render painless service, and yet it is important that every operator should cause the minimum of pain. Painless dentistry, in so far as that may be possible, has a decided economic value. It is the judgment of the writer that fifty per cent. of the pain and discomfiture of our patients at the present time could be eliminated by the use of sharp instrument, a true-running dental engine, sharp burs and abrasive stones that don't wobble.

ANNUAL OFFICE BUDGET

At the beginning of each year an office budget should be prepared covering fixed charges, overhead expenses and all sundry items, including the salary to be drawn by the operator. From this budget an average hourly fee may be struck for the year.

This budget should be prepared at least once a year, or at a time in the interval when the overhead charges of the office appreciably increase or decrease, as, for instance, in case of:

- Increased or decreased rent;
- Increased or decreased salaries of assistant or laboratory help;
- Increased or decreased salary of dentist governed by

- (a) Demand for services;
- (b) Speed, skill, experience;
- (c) Cost of living.

Thus the dental fee is automatically adjusted to conform to economic law. As an operator becomes older and works less rapidly, or there is a diminution in the demand for his services or a decrease in the cost of living or in office expenses, the average fee would be reduced, and conversely, as an operator increased the service rendered in a given time through increased skill, experience or speed, or the cost of living or office expenses increased, the average fee would automatically increase.

This budget for the average dental practice in an Ontario city would work out about as follows:

Capital Account—

College expenses per session	\$450.00	
Value of student's time	500.00	
	<hr/>	950 X 4
Equipment of office		\$3,800.00
		<hr/>
		1,200.00
		<hr/>
		\$5,000.00

Overhead Expenses—

6% on Capital invested		\$ 300.00
Depreciation on equipment, 10%		120.00
Rent and heat		300.00
Janitor service		60.00
Light, gas, power		20.00
Telephone		50.00
Laundry		30.00
Taxes		25.00
Sundry donations		50.00
Office assistant		350.00
Dental supplies and laboratory		750.00
Insurance—Sick, Accident, Fire Insurance (\$1,200) }		
Life Insurance (\$3,800) }		145.00
Salary—Savings for Investment	\$ 500.00	
Wife	1,000.00	
Self	1,000.00	
	<hr/>	2,500.00
		<hr/>
		\$4,600.00

Hours in Office—

7 hours per day;
 $5\frac{1}{2}$ days per week—38 $\frac{1}{2}$ hours;
 For 45 weeks (7 out)—1,732 hours.

Of this number not more than 60 per cent. of the hours are actual producing hours, or say approximately 1,000 hours.

The average hourly charge, therefore, in this case would be \$4.60, and it would be with this average in mind that this particular dentist should fix his fee.

It must be clearly understood that this average fee is merely a guide. Were it applied indiscriminately in every case, or for every hour, it would be just as illogical, just as unfair, and just as absurd as the old-fashioned system of charging a flat rate for certain operations (or should we say articles?).

This fee should be raised or lowered as conditions vary. The following factors should be considered:

- (a) Energy consumed (nervous patient or child);
- (b) Character of service, exceptional skill;
- (c) Speed of operator, amount accomplished;
- (d) Patient's ability to pay;
- (e) Cost of laboratory service.

Thus we have a logical and intelligent fixing of an average fee as a guide or standard, and a constant variation of that standard to meet the circumstances of each individual case.

How utterly unfair and unprofessional is the old plan of basing fees upon the number of fillings inserted, the number of crowns, or the number of teeth comprising a denture or bridge. One has only to compare an economic basis of fixing the dental fee with the older system to appreciate the financial, ethical and professional value of the more modern method.

Each dentist should prepare his own budget and thus arrive intelligently at the proper fee. The fixing of a minimum fee for the profession generally should be carefully avoided. A flat minimum charge would work an injustice to both patient and operator, and be of little advantage over past methods.

LABORATORY COST

In the foregoing budget laboratory service is included as a regular overhead expense, and in fixing the fee for any given period allowance must therefore be made according as there has been more or less laboratory service involved.

In many ways it is preferable to exclude laboratory service from the budget (which in the case cited would reduce the average hourly fee to a little less than four dollars) and then in each case add a sum sufficient to cover the laboratory charge. This method will be found particularly convenient for those who have their laboratory work done outside the office.

GROSS AND NET

Professional men frequently deceive themselves by thinking of the volume of practice in gross, rather than in net. Many dentists are ever ready to tell what their gross practice is, but are significantly silent upon the matter of net. Let us remember that the important economic consideration is not that of gross receipts, but the net difference between receipts and expenditures.

The particular budget above referred to showed a relationship between gross receipts and net profit, as follows:

Total receipts	\$4,600.00
Expenses	2,100.00
Net (salary)	\$2,500.00

That is to say, in every \$10.00 received, \$4.60 represented expense and \$5.40 profit, or in other words the cost of conducting the office was 46 per cent. Statistics gathered from many different sources indicate that it actually costs an amount varying from 40 per cent. to 60 per cent. of gross receipts to conduct the average dental practice.

(To be continued.)

THE WHOLE WORLD IS A BIG STORE

AND EVERYBODY IN THE WORLD IS A SALESMAN OF SOME KIND
(Copyright, 1916, Star Company)

Detroit is to have a "World's Salesmanship Congress" in the month of July.

At the Congress will gather manufacturers, dealers and salesmen of this and other countries. The problem of salesmanship, which is the great problem of *distribution*, will be discussed.

Every man interested in a business of his own and every individual interested in *himself* must be interested in this congress.

The world is a store, and all those that live here are salesmen or saleswomen.

Nobody gets "Something for nothing." We all buy and sell, and many are the different kinds of money with which the buying is done.

Friendship is bought and paid for with true friendship—there is no other price.

Confidence is purchased with Loyal service—there is no other way to get it.

Public gratitude is bought by efficiency in office and loyalty to the majority.

Everybody sells, everybody buys.

The little boy applying for his first "job" sells his activity and childish ambition to the employer.

The trembling old man with his cap in his hand, his white hair dyed brown, to hide his age, standing at the gate and waiting for the foreman, is trying to sell the tag end of his life.

To the disgrace of the country it must be added that the very children in the cradle are watched by those ready to buy them as soon as they are old enough to be put to work in mills and factories.

Very important is the problem of salesmanship which will be discussed at Detroit.

The question is, first of all, a question of *ambition*. That is the driving power that makes the salesman.

Salesmanship, which is *distribution*, which will solve a great material problem of civilization, is the most important task now of the commercial world.

There is not a dawdling clerk in any store, waiting for five o'clock, that could not be changed into an efficient worker, into a successful, *independent* man, if enough *ambition* could be added to his make-up.

Every great business man, is first of all, a salesman; also every farmer, every lawyer and every doctor.

First, you must have the *goods*, and second, you must know *how* to sell them.—*New York Journal*.

HOW CAN YOU RAISE FEES AND KEEP THE GOOD WILL OF A COMMUNITY?

Editor DENTAL DIGEST:

I have been a reader of the DENTAL DIGEST for about a year and have been very much interested in the articles on charges for modern dentistry. It is a great pleasure for me to read of the wonderful prices and build air castles for myself under the circumstances that surround the men who write these fairy tales. They all seem to have an air of aloftness without regard for the poor patient who has to pay.

I have only been in the practice of dentistry for two years and I couldn't begin to ask what your men consider a fair price. I am lucky enough to have a fair practice and be busy most of the time. I draw from a class of people who make on the average of \$3.50 a day and have to pay their dental bills, 5 and 10 dollars a month. I try to use the best materials and the best work, but I can't charge over \$30 for rubber plates and \$10 for molar crowns. At these prices, I am making a fair living and seem to be satisfying a lot of people. It is a fact that Mrs. Jones will ask Mrs. Smith who her dentist is, and how much she had to pay, so what are the dentists in the small towns going to do.

I wish you would ask some of your writers to consider the patients and some of the small town dentists or else let us know how we can raise our fees and still keep the good will of a community that is educated to fair prices.

Yours respectfully,
R. W. C.

"ALWAYS RENDER YOUR BEST SERVICE"

Editor DENTAL DIGEST:

If you want to get more for your service than the man across the street is getting, you must make your prospective patient believe your service is worth more than the service of the man across the street. Things are not sold for what they are worth, or for what we think they are worth, but for what we make the prospective purchaser think they are worth.

You have three things to sell—your personality, your service and your merchandise.

Your personality is the thing that you can sell at the biggest profit to yourself. Your service is the thing that you can sell at the biggest profit to your patient. Your merchandise is the thing that is hard to sell at much more than its intrinsic value. So, if you are not getting more for your good service than the man across the street is getting for his inferior service, I would say that you are putting too much emphasis on selling merchandise and not enough on Personality and Service. Of course, you cannot talk Personality to your patient, but you can impress your patient with your personality without talking. You can have a clean, neat, pleasing appearance and a clean, neat, pleasing office. It is easier to sell a smile than a frown. It is easier to sell a breath that smells like apple blossoms than one that smells like booze or a garbage can. It is easier to sell service at a profit that will add to the comfort, health and happiness of the patient, than it is to sell gold crowns or artificial teeth that will not add to the comfort, health or happiness of the patient.

Another reason you cannot get more for good service than the man across the street gets for poor service, you do not pay attention to the law of a sale: i. e., you try to get your prospective patient to act before you have created a desire for what you wish to sell. The same law holds good preaching a sermon or courting a young lady. If you are successful, you must first get attention, then interest, then desire, then resolve, then action. You must study your prospective patient and know how to get attention, how to create interest, how to stimulate desire into resolve and bring about action.

I think the trouble with most of us is, we try to tell them the whole story at once. We talk too much.

In my practice, we never try to make a contract with a patient or talk price, until we have their mouths in a condition where we can make an intelligent examination. This means any where from an hour to several hours, depending on the condition of the mouth and the condition of the mind of the patient. We start with the understanding that this

preparatory work is to be paid for at a set charge, providing they do not care to have us do their work. This gives us a chance to study our patient, their desires and the condition of their mouths, and gives us a chance to make either a good impression or a poor one.

When I think I have reached the right place, I tell them what they should have done, what it will cost them, and get an answer yes or no.

If yes, I make definite arrangements how the money is to be paid, and lay out the work in such a way that I can work to the best advantage. Then I put forth my best efforts to render service that will please them, and do not forget to keep them interested in the work as it progresses, and do not let them forget the agreement regarding payment. I had better stop here or the first thing I know I will be talking too much.

By the way, a man has succeeded in making my lady dentist believe that she will be better satisfied living with him than practising dentistry with me. He is good enough salesman to make her think what he tells her is true, so he has sold himself to her. Whether he is worth what he thinks he is worth remains to be proven, but she thinks so and the sale is made and I am out an assistant. Our motto is "Always render our best service, charge all we can get and keep busy." **UNCLE MACK.**

GETTING THE MONEY

Editor DENTAL DIGEST:

So much has been written on the subject of "getting the money," in dentistry that I cannot refrain from writing you of the success of a plan we inaugurated when we opened our offices about a year ago.

We have displayed, in a conspicuous place on both sides of the entrance to our operating room, copies of the enclosed sign, "A deposit required on all work," and we get the deposit, never allowing a patient to leave the chair on the first visit without a satisfactory arrangement regarding the payment for the work to be done.

How successful this has been might be told by stating that in a business of nearly ten thousand dollars this year we have less than two hundred outstanding and of this will lose possibly fifty dollars—the balance is good.

We feel the proper time to talk money to the patient is on the first visit and not when the work has been completed; if you wait until the work is completed you will usually wait for the cash.

It is absolutely unnecessary for the dentist to have his profits tied up in unpaid accounts and if he will, "Require a Deposit on all Work," and not be afraid to ask for it, it will save the average man hundreds of dollars every year.

"B."

CAN HE PROVE IT?

Under the title the "Doctor Must Live," the *Medical Economist* of April publishes the following statement:

DOCTORS MUST LIVE

"The average medical practitioner has expended in time and money the amount of about \$10,000 in getting his medical education. This is his capital in stock and it is only fair that he receive a fair return therefrom. Unless the physician is well housed, well clothed, and well fed, he cannot do his best work; and in the absence of these, the general public will suffer."

We shall be glad to have the *Economist* define what is meant by "getting his medical education," and how the doctor spends \$10,000 doing it.—EDITOR.

EXTRACTED TEETH WANTED

Dr. Williams and I are engaged in some research work which promises results of interest and value to many dentists. We need as many extracted natural teeth, especially upper anteriors with crowns in good condition, as we can obtain. The more we get, the more accurate the results will be. It is sometimes necessary to extract such teeth in order to make good restorations. If you have any such teeth, will you help by sending them? I will gladly pay express or postage.

Several have sent in such teeth and we hereby extend our thanks.

GEORGE WOOD CLAPP

THE ALASKA DENTAL SOCIETY

The Alaska Dental Society is sending out a letter to all the M. D.'s. of Alaska extending to them an invitation to become Associate Members of the A. D. A., the purposes of which are as follows: "The purpose of this organization shall be: The promotion of efficient, scientific and honest dentistry; the strengthening of fraternal bonds as between dentists; confidence as between them and the laity; and the spreading of the teachings of Oral Hygiene." (Extract from the Constitution.)

Alaska has taken the initiative in that part of the world in making this move, and we shall be interested as to the results.



PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Col. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.]*

A GOOD TEMPORARY FILLING.—A stiff mix of pure zinc oxid and oil of cloves rolled up into a pellet with bibulous paper makes an excellent temporary filling for sensitive cavities. It can be used in any cavity where temporary stopping is indicated. It sets quite hard.—J. F. NELSON, D. D. S., Washington, Iowa.

REPAIRING A BROKEN GOSLEE TOOTH.—A broken Goslee tooth on a short bite bridge may be easily repaired stronger and better than when originally made by using a facing and molding wax in place of the original porcelain. Cast and a splendid strong tooth results.—J. S. BRIDGES, D. D. S., Chicago, Ill.

TO STOP A LEAKY VULCANIZER.—I see in March DIGEST, first hint (Leaky Vulcanizer) a very messy way to stop leaky vulcanizer.

My turn to contribute. Take the soft solder wire that comes to the hardware trade and place it in the vulcanizer groove, heat the vulcanizer and force solder to place. It *never leaks*.—WM. J. WRAY, D.D.S., Philadelphia, Pa.

TO MAKE OVER AN OLD BUR.—When a bur becomes dull and of no further use, it may be made useful again by grinding half away on an emery wheel, thereby making an inverted cone out of it.—T. J. FORD, D. D. S., Searcy, Ark.

SIMPLE ASSORTMENT OF CASTING RINGS.—Splendid inlay casting rings can be purchased very cheaply by selecting whiffle-tree ferrules at any blacksmith supply house. An assortment of ten or twelve will cost only about a dime.—*Northwest Journal of Dentistry—The Dental Cosmos.*

BURNING OUT WAX.—Wax in a casting investment should never be burnt out with a very hot flame, causing the melting wax to boil up through the sprue hole. Avoid this and you will have smoother castings.—ROBERT J. CRUISE, D. D. S., Chicago, Ill.

TO AVOID BUBBLES IN CASTING.—Do not paint wax model with cam-

*In order to make this department as live, entertaining and helpful as possible, questions and answers, as well as hints of a practical nature, are solicited.

el's hair brush or any other device, but wind a few fibres of cotton on toothpick, use same as a dropper to carry your investment. Do not smear, but blow your investment to place with a chip blower. Other steps followed according to the recognized technique principles, your castings will come out smooth and will fit perfectly without retouching.—M. J. RUZICKA, D.D.S., *Dental Review*.

MATRIX USING CELLULOID.—Lock the strip together by cutting on opposite sides, then heat small serrated flat nose pliers and fuse the celluloid by pinching with the heated pliers. The celluloid in Kodak films is suitable for this work when the coating is removed. To remove coating wash in hot water.—E. T. EVANS, Decatur, D. D. S., Ill.

GOLD SHELL CROWN AND POST FOR SHORT TEETH.—Sometimes we are called upon, though very rarely, to use posterior teeth which are very short, almost to the level of the gum tissue, as abutments in extension bridges. Usually we fail when we attempt to use such short teeth as anchorages for bridges in the ordinary way, for these bridges will become loose within a short time. To overcome such a weakening, it is advisable to make a gold shell crown with a post.

The procedure is as follows:—After tooth is properly treated, fill the entire cavity with amalgam and make the crown in the usual way and reinforce it. Then place the crown on the tooth in its proper position and with a bur No. 7 drill through the centre of the occlusal surface of the crown into the pulp chamber. Insert there a post of clasp wire, gauge 14 and remove crown and post and solder them together. Place it back in position on the tooth and you are ready to take the impression for the bridge.—EDWARD D. HANDELMAN, D.D.S., Chicago, Ill.

QUESTIONS AND ANSWERS

Question.—Kindly let me know through *DIGEST* what should be done in the following case and if I was justified in extracting tooth.

Girl, 10 years old. Five months ago she came to my office with upper left central in chronic abscess condition. I proceeded to treat tooth and after 3 or 4 sittings she failed to return.

The other day she came in with her mother with upper lip swollen and painful. I applied pressure to gums and pus flowed out through fistula, but not through the tooth, which was badly broken down. I drilled into tooth with a rose bur, but still I could not get pus to drain through tooth. I lanced gum and got as much pus out as possible and prescribed use of antiphlogistine to relieve the pain and inflammation and she went home. Next morning she came in with worse swelling and

then I decided to extract the tooth, believing there was some other complication, she having broken the tooth in a fall about 2 or 3 years ago. After tooth was out, there was protruding through the apical foramen for about $\frac{1}{2}$ -inch, a tooth-pick. This undoubtedly was cause of the trouble.

I believe, if I had observed before that there was a piece of toothpick there, it would have been useless to have tried to remove it, as I would have had to drill around it and this would only have forced it in further.—W. P. S.

ANSWER.—It is hard to sit in judgment on such a case at such a distance and with the meager facts furnished in your letter. The most important fact lacking is the kind of people, principally mother, that you had to deal with; some are so mulish, or so disinterested, or so stingy, that to do the best for them or their children is impossible. But for the sake of argument I am going to assume that this mother is not that kind; and proceed to criticise your work on that basis. In the first place there is no argument as to the seriousness of the loss of a central incisor to a girl of ten years.

Secondly, three or four or even less treatments should have been enough to have effected a cure in most cases of chronic abscess, especially in so young a patient.

Thirdly, as cure had not yet been effected, you probably were at fault in not having impressed upon the mother sufficiently the importance and seriousness of the case, else she would not, most likely, have failed to return for so long a time.

Fourthly, when she did return with fistulous opening and blocked canal, you should have recommended an X-ray picture, and with it as a guide have opened canal nearly to apex, filled to that point thoroughly with an impervious filling, enlarged fistulous opening sufficiently to get free access to end of root with a large bur, with which you could have removed tooth-pick, necrosed bone and end of root down to your filling material, thus effecting in all probability, a satisfactory, and permanent cure. If, however, you did not consider yourself capable of following out this line of procedure, there certainly is a dentist in San Francisco who is capable of doing this particular thing, to whom you might have referred your patient.—V. C. S.

Question.—I would like to have you go over the methods of sterilizing instruments for the benefit of one of my patients. I told my patient upon inquiry that I did not boil all or any of my cutting instruments. I first scrub them with soap and water, and then immerse them in either phenol or lysol following with 65 per cent. alcohol. I also have a stand-

ard formaldehyde sterilizer I use when I do not employ this method. All rubber dam weights, elastic instruments, matrix retainers and matrices, clamps, etc., I boil in an electric heater. I then place my impression trays in an electric sterilizer which I can safely say few dentists do. Now I inform my patient, that surgeons do not boil scalpels. You can briefly outline their methods and criticise mine if they are not in accord with methods of modern accepted practice.

The patient was highly skeptical of any means of chemical sterilization, but is bound to accept your opinion as authority. I will look for your reply in DENTAL DIGEST.—D. C., Mason, Ill.

ANSWER.—Your method of sterilization, as described in your letter, I consider thorough and adequate in every particular. Personally I think that most up-to-date dentists, in our desire to be away over on the safe side of a possibility of spreading infection, and beyond a possible fair criticism on the part of the most fastidious of our patients, carry our sterilization in practice well beyond the reasonable necessity involved.

I often wonder when patients manifest such critical, skeptical interest in our methods of sterilization, as the lady you quote, if they ever stop to inquire whether the forks and spoons which they place in their own mouths daily in restaurants, hotels, or homes have been thoroughly sterilized by boiling, kept in sterile containers, and handled always with surgically clean hands.—V. C. S.

Question.—A case has just come under my notice of a nine-tooth bridge supported anteriorly by Richmond Crowns on the four incisors, and posteriorly by a shell crown on the 2nd molar. Steele's facings and posteriors have been used in this case throughout. The molar shell has become loose while the incisor crowns all remain intact. By what means can this piece be successfully reset?—F. R. G.

ANSWER.—You submit a hard question. Am afraid I cannot give you a very easy way out of the difficulty you describe. The way I would suggest, however, is to cut into the Richmond crowns on the lingula, severing the post, when bridge should lift off pretty easily. The posts may be removed either by cutting around them with a very fine bur or by grinding them out with the smooth sided end cutting bur as they will probably be too short to get hold of with a pin-puller. Fit new pins (better set one also through shell crown into body of molar tooth), hold with sticky wax and solder. Or prepare holes through crowns with diverging sides without undercuts, press inlay wax into same around ends of pins. Remove and cast each separately. Set the bridge and all five locking pins with their cast inlay heads, with one mix of cement. Or if your parallelism permits, pins may be cemented into bridge first.—V. C. S.



**PRESIDENT BUTLER APPEALS FOR
\$1,000,000 TO ENDOW COLUMBIA
DENTAL SCHOOL**

A campaign has been started among dentists of this city to obtain for New York a \$5,000,000 dental dispensary and institution of dental research, which shall render unequalled facilities for taking care of charity and other patients, including all of the 900,000 school children here, and which shall also be so equipped that it will offer unsurpassed facilities for the study and research of dentistry.

Dr. L. W. Duxtater, a dentist of 667 Madison Avenue, who was one of the first to recognize the need for just such an institution and who has written very widely on the subject, last night gave the *New York Times* his reasons for wishing to see such a building erected.

According to Dr. Duxtater, even laying aside anything which would tend to help the science of dental surgery, the very fact that nearly a million boys and girls will be able to start life after expert care has been taken of their teeth and mouths through the most critical period of their development will make the dispensary worth while.

"The time has come," said Dr. Duxtater, "for a great dental clinic in this city. Boston has the Forsythe Dental Infirmary, which has been doing good work for the public school children of Boston for several years. George Eastman of Rochester will donate the Eastman Dental Dispensary to the City of Rochester. This building when completed will represent a total investment of about \$1,200,000. The City of Rochester will provide at least \$12,000 a year for five years to carry on work in the schools and private citizens will contribute \$10,000 a year for five years.

SIX-STORY BUILDING PLANNED

"A dental infirmary in the City of New York to properly care for the children in the public schools would cost approximately \$5,000,000. This building would be about six stories high, of handsome design, and it would be provided with every convenience for advanced study and research work. There would be X-ray equipment, as well as a surgical department for throat and nose operations. Orthodontic work would be a specialty. A large lecture hall would be provided as well as an attractive amusement room, and the work would begin with approximately 100 competent operators in charge. There would be a training school for dental hygienists, who later on would do professional work in the schools of New York.—*New York Times*, May 18, 1916.

COÖPERATION BETWEEN THE DENTIST AND THE ORTHODONTIST

If the dentists and orthodontists are to render the greatest possible service to the public, there must necessarily be coöperation between the two. The necessity for this coöperation is apparent to every one connected with these two professions, but in times past there has not been the close relation existing between the orthodontist and dentist that there should have been. There have been several reasons for the differences which have existed between the two groups, whose work is very closely related and whose success is often interdependent.

It is the dental practitioner who first observes cases of malocclusion. In fact, the general practitioner who has reached the point of being a "family dentist" will be in a position to first observe malocclusions that develop in young children. If he is desirous of doing the greatest service for patients who may require orthodontia treatment, he should have a consulting acquaintance with some competent orthodontist to whom he can refer his patients at the proper time, so that they may be treated with the least trouble to the patients and obtain the best results in the shortest time conditions will permit. There are, however, some dentists who refuse to follow this plan, and we have even known of men who, when they found malocclusion in the mouths of their patients, would not refer them to an orthodontist for several reasons, the principal reason being that they take a purely mercenary view of the situation. Some have argued, "Why should I send this case to the orthodontist, or why should I send to some one else what I cannot do myself?" In other words, the dentist is not capable of correcting the malocclusion, yet he would allow the defect to remain rather than refer it to one who could probably treat it. This question of financial consideration has often been the bone of contention—whether orthodontists should pay commissions to general practitioners. As we do not desire to discuss this phase of the question at this time, we will simply state that the man whose perspective of malocclusions in cases of his patients is from the financial standpoint will not necessarily work for the best interests of his patients.

Other instances where coöperation between orthodontists and dentists is very beneficial to the patient are in those cases in which malocclusions are occurring or may be produced because of prolonged retention or early loss of the deciduous teeth. We have seen a great many cases of malocclusion produced by the early extraction of deciduous teeth, which could have been avoided if the dentist had consulted an orthodontist who was familiar with the manner in which malocclusions develop. We have also seen malocclusions grow from a minor defect

to a serious condition simply because improper advice was given by the dentist, such advice often being for the patient to "wait awhile and the case will correct itself." If, therefore, an orthodontist were consulted in cases of malocclusion, in many cases in which his line of work qualifies him to understand the conditions better than are known to the general practitioner, a greater amount of good would be accomplished for the patient, and, in fact, for humanity.

We must not blame the general practitioner or the dentist entirely for this lack of coöperation, for we are aware that there are many men practising orthodontia who do not desire to be called into consultation with the general dentist unless there is a fee involved. Some orthodontists positively refuse to give advice in regard to the treatment of a case unless they can immediately obtain a fee. The orthodontist who takes this narrow view of life is certainly not disposed to benefit the community, or elevate his profession, and in a short time will find that a man with a broader view will gain his practice—*International Journal of Orthodontia*.

APPELLATE COURT DECISION ON SOME POINTS OF INTEREST IN DENTAL LAWS AND THEIR ENFORCEMENT

AT A TERM OF THE APPELLATE COURT, Begun and held at Chicago, on Tuesday the seventh day of March, in the year of our Lord one thousand nine hundred and sixteen, within and for the First District of the State of Illinois.

Present: Hon. Hugo Pam, Presiding Justice; Hon. John M. O'Connor, Justice; Hon. Clarence N. Goodwin, Justice; James S. McInerney, Clerk; John E. Traeger, Sheriff.

Be It Remembered, That on the 15th day of March, A. D., 1916, there was filed in the office of the Clerk of said court, an opinion of said court, in words and figures following, to-wit:

The People of the State of Illinois,	} Appeal from
Defendant in Error,	
No. 21559 vs.	
Cassius M. Carr,	
Plaintiff in Error.	} Error to Municipal Court of Chicago.

Mr. Justice O'Connor Delivered The Opinion of the Court.

Plaintiff in error, hereinafter called the defendant, was prosecuted upon an information filed on behalf of the Illinois State Board of Dental Examiners, charging him with unlawfully practicing "dentistry, dental

surgery, and other branches thereof, without first applying for and obtaining a license for such purpose from the Illinois State Board of Dental Examiners" in violation of the Act to Regulate the Practice of Dental Surgery and Dentistry. From a judgment of conviction of the Municipal Court of Chicago, imposing a fine of fifty dollars, he prosecutes this writ of error. The case was tried before the court, a jury having been waived. There is little dispute as to the facts: The evidence tends to show that the defendant was admitted to practice dentistry in Utah in 1894; that in May, 1914, he established and conducted in Illinois what he designates as "C. M. Carr's School of New Dentistry," his place of business being No. 30 North Dearborn Street, Chicago; that he was still conducting the same at the time of the trial; that the defendant had invented a set of instruments (one hundred and fifty in number) which he used in the work; and that he had recently been awarded a patent covering these instruments. It is claimed that the instruments were superior to other instruments in use, especially in the treatment of pyorrhea. The course pursued in said school consisted of an explanation and demonstration of the use of said instruments; also instruction as to the proper care of the instruments; At the time of the trial about sixty-three students, all of whom were dentists regularly licensed to practice in Illinois, had received instruction in defendant's school. Each of these students was required to pay the defendant \$175 tuition and \$175 for a set of the instruments.

The method of instruction adopted by the defendant was: After teaching the student how to keep each of said instruments in proper condition, the student would bring in one of his patients. The defendant would then, in the presence of the student, strip, scrape, plane, polish and grind the teeth of the patient, demonstrating, as defendant states, to the student the use of the instruments. The greater part of the work, however, was done on the teeth of the different patients by the dentists or students themselves. For this instruction and demonstration the defendant charged each dentist \$175. None of the several patients paid anything to the defendant for this work.

Section 3, Chapter 91, R. S., provides that no person shall begin the practice of dentistry or dental surgery, or any branch thereof, without first applying for and obtaining a license for such purpose from the Illinois State Board of Dental Examiners. Section 5 of the same act provides: "Any person shall be regarded as practicing dentistry or dental surgery, within the meaning of this act, who shall treat, or profess to treat, any of the diseases or lesions of human teeth or jaws . . . provided . . . this act shall not prevent students from performing dental operations under the supervision of competent instructors within a dental

school, college or dental department of a university recognized by the Illinois State Board of Dental Examiners."

Section 16 of the same act provides that any person who shall practice dentistry without first obtaining a license for that purpose shall upon conviction be fined for each offense, not less than \$50 or more than \$200.

There is no contention that defendant's school has been recognized by the State Board of Dental Examiners as provided by said Section 5, and it is conceded that he has no license to practice dentistry in this state. The defendant contends that he is not practicing dentistry, but that he is teaching "particular methods of treating dental diseases" which he designates as "preventive dentistry," and that he does not receive compensation for the work he does on the teeth of the patients, and that he has not therefore violated any law of this state.

Under our statute a person may not practice dentistry without a license unless he comes within one of the exceptions made by the statute itself. If it be conceded that what the defendant did was done solely for the purpose of teaching the use of his instruments and his "Particular methods of treating dental diseases," this under all of the facts shown by the evidence would not bring him within any exception made by the statute. Nor do we think that the fact that he did not receive any compensation, if such were the fact, would do so if the work he did actually constituted practicing dentistry as defined by the statute. We think, however, that the evidence clearly shows that he did receive compensation for what he did.

The statute expressly states what shall constitute practicing dentistry, and whether the defendant was practicing dentistry within the meaning of the statute was a question to be determined from what he did, and not what he designated his acts to be. After a careful consideration of all the evidence in the case, we are clearly of the opinion that defendant was practicing dentistry without a license, within the meaning of the Act to Regulate the Practice of Dental Surgery and Dentistry, the judgment of the Municipal Court of Chicago will therefore be affirmed.

AFFIRMED.

Justice Hugo Pam and Justice Clarence N. Goodwin concurring.

I, James S. McInerney, Clerk of the Appellate Court, in, and for the First District of the State of Illinois and keeper of the records, files and seal thereof, DO HEREBY CERTIFY That the foregoing is a true copy of the opinion of the said Appellate Court in said cause, as appears of record in my office.

In Testimony Whereof, I have set my hand and affixed the seal of the

said Appellate Court, at Chicago, this 27th day of March, in the year of our Lord one thousand nine hundred and sixteen.

JAMES S. MCINERNEY

Clerk of the Appellate Court of the
First District, Illinois.

(SEAL)

THE ASSOCIATION OF COMMERCE

New Orleans wants the honor of entertaining the 1918 convention of the National Dental Association and allied societies and organizations. This unanimous desire was expressed at a meeting of the First and Second District Dental Society, held on March 28. Coöperation of the Convention and Tourist Bureau of the Association of Commerce has been obtained, and a nation-wide campaign to bring the dentists to the "Crescent City," in 1918 will be launched.

At the enthusiastic meeting of New Orleans dentists on March 28th, a special committee of ten named at a previous meeting, reported upon the advisability of going after the big gathering. It was agreed to send a formidable delegation to the Louisville meeting in July, and the invitation and claims of the Southern metropolis will be presented in a clear, convincing manner.

A special committee has been selected to develop State and National interest in New Orleans. The personnel of this committee insures the claims of New Orleans being well received. Dr. J. P. Wahl was named chairman of the committee, and he will be assisted by Drs. J. Rollo Knapp and Paul de Verges.

Dr. Wahl and his committee have gone to work. They intend making every day between now and the Louisville meeting count. Every member of the National body will be communicated with, and one of the most systematic campaigns ever attempted, will be waged by the Orleanians. New Orleans and Louisiana stand behind the dentists in their commendable desire to entertain their professional brothers in 1918, and it is believed success will crown their efforts.

J. P. WAHL, *Chairman*,
J. ROLLO KNAPP
PAUL DE VERGES, *Committee*

Good words shall gain you honor in the market-place, but good deeds shall gain you friends among men.—*Lao Tzu*.

AN EPITOME OF CURRENT DENTAL AND MEDICAL LITERATURE

[*Dental Items of Interest*, June, 1916]

Exclusive Contributions

- Is Diet the Primary Constitutional Factor in the Causation of Dental Caries? By C. M. MacKenzie, D.M.D.
 The Technique of Intra-Muscular Injections of Mercury in Pyorrhea Alveolaris. By Paul Gardiner White, D.M.D., U. S. Navy.
 *Systemic Disturbances Due to the Teeth. By Bertram B. Machat, D.D.S.

Prosthodontia

- Method of Producing Accurate Occlusal Surfaces on Porcelain Crowns. By D. D. Beekman, D.D.S.

Orthodontia

- The Abnormally Deep Overbite; Its Significance and Treatment. By Dr. Herbert A. Pullen.

Society Papers

- The Successful Scientific Treatment of Periodontal Diseases (Pyorrhea Alveolaris). By T. Sidney Smith, D.D.S.
 Present Aspect of the Amoebiasis Question in Pyorrhea. By Allen J. Smith, M. D., and M. T. Barrett, D.D.S., M.S.

SYSTEMIC DISTURBANCES DUE TO THE TEETH

BY BERTRAM B. MACHAT, D.D.S., BATH BEACH, L. I.

I read the article in the November issue by A. F. Perkins, D.M.D., entitled "Root Canals That Cannot Be Filled."

On page 909 the Doctor relates the history of the young woman who "had suffered for a long period from excessive headaches, etc. Further on he says that examination of the mouth showed only two teeth with cavities, very tiny, all others being perfectly sound." Further, "After a great deal of *thinking*, I decided to extract all her upper teeth, etc."

It would be highly interesting and instructive to know just what the doctor was "thinking." I presume that the case was an uncommon one; that it presented no symptoms macroscopically or pulpably indicating such extreme condition; hence the method in which the doctor reached his conclusion is that which is most important.

Radiographs might have been helpful, but then the essayist appears to be skeptical, as is evidenced from his remarks on "limitations" thereof.

We all have patients who come to us for relief from some long-standing case of neuralgia, headache, etc. The subject is a profound one, often very perplexing, and, in spite of hard thinking, plus fluoroscopic and radioscopic examination, in many cases we are not able to give correct etiology and diagnosis.

Several years ago I reported a long-standing case of neuralgia relieved by the removal of a molar that had been hypercementosed. Later it was found that an infected cuspid was the true cause.

Last year a patient, a young woman, came to me complaining of neuralgia of the parietal and parieto-occipito region. She described same to be very severe, intermittent and of about two months' duration. This necessitated her giving up her position; she lost weight, was mentally depressed, more so since some generous neighbor ventured the opinion that it might prove to be a brain tumor. I radiographed the case, and found nothing abnormal except that the buccal roots of a molar tooth on the corresponding side was unfilled. This was opened into and relief obtained.

Again, the case of a young man who complained of a lower molar which served as an abutment for a bridge, pulp not having been devitalized. Pulp degeneration with a slight involvement of the pericementum was suspected. Under mandibular anesthesia, the pulp was removed and probes inserted to ascertain the correct root length. The resulting radiograph disclosed an unsuspected impacted third molar as the real offender.

[*The Dental Cosmos*, June, 1916]

Original Communications

- What is Dentistry's Next Great Step? By Alfred C. Fones, D.D.S.
 *New Standards in Root-Canal Treatment. By Wm. B. Dunning, D.D.S.
 A Case of Ranula with Acute Inflammatory Symptoms. By W. C. Middaugh, D.D.S.
 A Detachable Anchorage Connection for Orthodontic Appliances. By J. Lowe Young, D.D.S.
 *Pædology and Its Relation to Dentistry: The Study, Treatment, and Education of Children Requiring Special Attention. By E. B. McCready, M.D.
 An Investigation of Mottled Teeth: An Endemic Developmental Imperfection of the Enamel of the Teeth, Heretofore Unknown in the Literature of Dentistry. (II.) By Frederick S. McKay, D.D.S., and G. V. Black, M.D., D.D.S., Sc.D., LL.D.
 Bridge Work for the "General" Practitioner. By Jas. K. Burgess, D.D.S.
 War Dental Surgery: Some Cases of Maxillo-facial Injuries Treated in the Dental Section of the American Ambulance at Neuilly (Paris), France. (IV.) By Dr. Geo. B. Hayes.
 Where Are We in the Treatment of Pyorrhea Alveolaris? By E. A. Smith, D.D.S.

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 Oral Hygiene in the Chesterfield Letters.

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PAEDODOLOGY AND ITS RELATION TO DENTISTRY: THE STUDY, TREATMENT,
AND EDUCATION OF CHILDREN REQUIRING SPECIAL ATTENTION

By E. B. MCCREADY, M.D.

RÔLE OF THE DUCTLESS GLANDS

It is now generally conceded that the chain of ductless glands is of the greatest importance in the development of the cerebro-spinal and osseous systems in early life, and that impairment of function of one or another of these glands underlies the disorders of nutrition which inhibit proper development. Under the caption, "The Ductless Glands and Constitution," Falta says—"We must not accept the ductless glandular system for itself alone, but must regard it as a constitutional component, the ductless glands as vegetative organs together with the nervous system regulating their functions." While our knowledge of the normal action of these glands is still somewhat hazy, yet they are found to preside, in some manner, over certain correlations of the body. These correlations are exceedingly variable, and this variability is most apparent when and where body states are atypical. The adjusting mechanisms of development are more or less reciprocal; thus a ductless gland not only influences development but also is itself influenced by changes in general development. There is reason to suppose that in the harmony produced through the concerted action of the ductless glands, the leading rôle is played by the pituitary, whose hormone activates the smooth muscles of the intestine and of the organs of circulation, as well as the stomach and liver, and also by the thyroid, which supplies the stimulus for body metabolism. As a check upon the influence of the thyroid in infancy and childhood, the thymus, the general lymphatic system, and perhaps the pineal gland, become active. In addition, these produce that delay of sexual activity which is essential to the proper maturation and stability of the somatic functions. In due time the chromaffin system stimulates the sexual organs to activity, as well as hastens the growth of the muscular and skeletal systems. Of great importance at this time is the action of a hormone of the pituitary gland, which activates the cells of almost every organ of the body. This much may be postulated regarding the influence of the internal secretions upon somatic development. Their equally important influence upon psychic development is shrouded in a greater degree of obscurity, though the field of our knowledge is rapidly being broadened and illuminated.

MEANS OF COMBATING INJURIOUS MICRO-ORGANISMS

Micro-organisms are always present, and always will be present, in the human mouth, but we know that they are rendered inert and inactive if

deprived of a food pabulum on which to thrive and multiply. Therefore our conclusions would be:

(1) That up to the present time, the frequent removal of plaques, stains, and accretions from the surfaces of the teeth by hand polishers, is the most effective means known for the prevention of the initial stage of dental caries.

(2) That the frequent removal of all calcareous deposits around the necks of the teeth by instruments is most effective in the prevention of infection and destruction of the dentinal tissues surrounding the roots of the teeth.

NEW STANDARDS IN ROOT-CANAL TREATMENT

By WM. B. DUNNING, D.D.S., NEW YORK

OPENING THE CANALS

In single-rooted teeth it is usually a simple matter to find and enter the root-canal. With multi-rooted teeth, however, there is frequently difficulty in locating the orifices of the several canals. The cavity is washed with alcohol and dried by the air-blast. As the subpulpal wall blanches into dryness, the minute openings of the canals, not drying so quickly, may often be seen, and the clue easily followed up.

Before leaving the pulp chamber proper, let me suggest great caution in preserving the natural landmarks of the sub-pulpal wall, since they are important guides in tracing canal orifices. For this reason the bur should never touch the sub-pulpal wall; its use ends with the removal of the pulpal wall in uncovering the pulp. Hand instruments only should be used in exploring for orifices. A delicate hatchet blade on a conveniently bent shank is very useful in "nibbling" into likely corners, and is as safe as any instrument for that purpose.

At this point it is necessary to consider a means of exploring and enlarging the canal, often of extreme fineness in caliber and filled with toxic substances, in such a manner that the true lumen may be followed and its contents removed without any mechanical violence sufficient to force the poisonous material toward the apical foramina. Our greatest help here is Shreier's paste of metallic sodium and potassium. Minute particles of this paste, clinging to a barbed or twisted broach, on coming in contact with the organic contents of the canal produces a rapid destruction by oxidation, whether the tissue be dead or living. In this way the minutest organic filament is traced and destroyed, and the liquid by-products are removed either with the broach or by bibulous paper. The true canal is thus discovered and emptied, and the sodium and potassium paste in attacking the contents of the dentinal tubuli, further breaks down the surface in immediate contact, thereby enlarging the canal. Complete

sterilization is produced within the zone of action. Following this treatment the canal should be irrigated with hydrogen dioxid, 3 per cent., dried with sterile paper points, then flooded with alcohol and again dried. The great advantage in this method lies in the fact that the opening is effected through the removal of *organic* contents of the canal, hence in clearing the true canal, whereas in the use of sulphuric acid, as suggested by Dr. Callahan, the inorganic structure is attacked, and the operator may easily depart from the real clue and work into a "false pocket." The sulphuric acid method, however, is a valuable aid in cautious hands.

Any and every root-canal should be opened with a view not merely to removing its dangerous contents, but to leaving the canal so shaped that the filling operation may be executed with the greatest ease and certainty. This means an opening to and *slightly through* the apex of the canal of sufficient caliber for the filling substance to pass, and tapered from a liberal pulpal orifice without shelves or inequalities along its walls on which an instrument may trip or catch. The progress made should be determined by placing a sterile fine gold wire in the canal with the end bent to insure easy removal. Two or three roentgenograms may be needed before the wire is shown to touch the periapical tissue. The canal walls should be field smooth with the barbs of a sharp broach so that the instrument can find only a continuous surface from orifice to apex. Such a canal may be filled with certainty, for the simple reason that the filling and filling instrument can only go in one—the right—direction. This shaping of the canal may be done without unduly weakening the root. Revolving reamers should be used as little as possible. They are convenient in making a free orifice, but further in the canal become dangerous from the likelihood of leaving the canal proper and perforating the wall, or in creating shoulders of dentin not easily removed, which if left will "snag" the filling instrument and interfere with correct technique. There is nothing safer than a new barbed broach, operated by skilful fingers, backed up by the almost infinite patience this work requires.

Perforation of the canal wall is an unfortunate accident, but one which may happen in the best-regulated dental practice. When this occurs, the canal should be rinsed of all débris and a dressing made of a non-irritating antiseptic—such as a mixture of oil of cloves and wood creosote, the tooth closed and allowed to rest for several days. This dressing may be changed several times until it is possible to dry the place of perforation by means of alcohol and warm air. If this spot is then wetted with oil of cajuput, or better still, Dr. Callahan's solution of rosin in chloroform, the excess of liquid removed, and a small thin wafer of slightly warmed gutta-percha be applied thereon and gently carried to place with a suitable plugger, this awkward point of weakness should be permanently protected. Of course

the foregoing presupposes that the opening is accessible and visible. A perforation near the apical end of the canal is difficult of treatment, and requires the most delicate skill and good judgment. Under strict asepsis, the gutta-percha filling should obliterate that point of weakness.

[*The Dental Summary*, June, 1916]

Regular Contributions

Hygienic Removable Bridgework. By J. W. Beach.

Pyorrhea Alveolaris—A Consideration of its Etiology, Prognosis, and Treatment to Date.

By John B. West.

Professional Efficiency—Educational, Physical, Financial. G. E. Harter.

Review of Mr. Harter's Paper. By Otto U. King.

Why Dentists are not Pathologists. By Eugene S. Talbot.

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Simple Method for the Local Application of Drugs in Treatment of Pyorrhea Alveolaris.

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New Legislation Affecting the Army Dental Corps.

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Preparedness League of American Dentists.

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[*The Dental Review*, June, 1916]

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President's Address. By J. P. Buckley.

Preventive Dentistry. By W. A. Chamberlain.

Orthodontia by Bridgework. By H. E. Bliler.

Preventive Dentistry. By W. I. Carlsen.

Fundamental Color Harmony in Tooth Selection. By J. H. Prothero.

Correct Interpretation of X-Ray Films. By R. I. Lewis.

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A Better Professional Status. By J. L. Helmer.

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[*Dominion Dental Journal*, April, 1916]

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Pathology of Dental Infections and Its Relation to General Diseases. By Weston A. Price, D.D.S., Cleveland, Ohio.

*Pains and Affections of the Mouth and Teeth Which May be Manifested in Other Parts.

By A. E. Webster, D.D.S., L.D.S., M.D., Toronto.

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PAINS AND AFFECTIONS OF THE MOUTH AND TEETH WHICH MAY BE
MANIFESTED IN OTHER PARTS

A. E. WEBSTER, D.D.S., L.D.S., M.D., TORONTO

There are many pains and discomforts referred to the mouth whose origin is often very remote from these parts. There are inflammatory processes appearing in the mouth which are merely extensions from contiguous parts. The rhinologist, otologist, and the ophthalmologist have learned that all pains and discomforts referred by the patient to these parts are not of local origin, and, in fact, many of the apparent disease manifestations observed are of other origin.

The symptom which is most common to all these associated parts is pain, and the chief cause of pain having its origin in the mouth is infection. Pain caused by pressure is more likely to be referred than pain which is not. Pain from infection and under pressure may be both referred and local.

The most common cause of referred pain about the mouth and teeth will be found in impacted and infected teeth. The restless, feverish teething child suffers many pains not referred to the mouth at all. The incorrigible, restless, immoral boy may very often be suffering from a form of irritation to his nervous system, not referred to his mouth, but to his eye, nose or ear, or have no consciousness of pain, while as a matter of fact an impacted tooth may be the cause of his mental bias. Patients suffering pains in the regional distribution of the fifth pair, or having symptoms of nervous origin should have a thorough mouth examination. Any tooth which has not erupted at its regular time must be looked upon with suspicion. Erupting and non-erupted deciduous teeth give rise to more general and referred symptoms than similar impacted permanent teeth though there are many cases recorded of patients relieved from serious mental derangements by the removal of impacted teeth. Within

my own experience I have seen marvelous recoveries from the removal of impacted teeth. About a year ago a man was referred to me for examination who had suffered from severe pains referred to the eyes, causing almost total blindness for certain periods, which was completely relieved by removing an impacted cuspid. A few days later Dr. Paul reported a case of deafness of years standing completely relieved by the removal of an impacted lower third molar.

The most commonly impacted teeth are lower third molars, upper cuspids and lower second bicuspids. In all cases of obscure pains referred to any part of the distribution of the fifth pair should demand a thorough examination for the presence or absence of all the teeth. A tooth is not free from suspicion of impaction unless it is fully erupted and in normal relation and occlusion. Dentists of experience have learned that the opinion of the patient as to the location of a pain is of little real value in making a diagnosis. It is not at all uncommon for patients consulting a dentist to have their ears filled with cotton wool, saturated with laudanum. Pains having their origin in teeth with vital pulps are not often referred to the eye, but pain from teeth the seat of acute dento-alveolar abscess is often referred to the eye.

Infections from dental pulps may occasionally penetrate the maxillary sinus or the nasal cavity. My own observation leads me to think that few cases of empyema of the antrum come from a dead pulp in a tooth. There is, however, more chance of such an infection from an acute or chronic alveolar abscess. In the latter case there is an extension from a large area of infection. Even though a tooth would seem to be the origin of an acute or chronic infection of the antrum, I am not so sure that any attempt should be made to drain the sinus through an opening made through the socket of an extracted tooth. Reinfection is so frequent through such an opening, and the difficulty of closing an opening which is large enough to be of any value in treatment makes one hesitate to ever drain through the mouth. I have opened into the antrum on many occasions for rhinologists in years gone by, but of late years I have escaped such responsibility. Most infections of the antrum come from the nasal cavity and ought to be drained into it. It is not easy to differentiate pressure pains of the antrum and those from infected teeth or the eye, which I know too well from personal experience.

Acute dento-alveolar abscess of the upper lateral incisor or the cuspid are frequently so extensive that both the nasal cavity and the eye are involved far more than the teeth themselves, the patient himself having no knowledge of anything being wrong with the teeth. Following such attacks I have seen pus come from the nose and the eye. On one occasion I saw a sinus from an upper third molar open posterior to the pillar

of the fauces. One can readily understand what difficulties the surgeons in these cases met with in controlling the pus. I must say I have seen some wonderfully unsuccessful surgical operations in the region of the mouth to get rid of pus which had its origin in a pulpless tooth. Every tooth which is of a different color from its neighbor should be under suspicion. Pus in the nose, maxillary sinus, eye, anterior part of the mouth should demand a thorough examination of the mouth and teeth.

[*Oral Health*, May, 1916]

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 United States Public Health Service.
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 a Canadian Dentist.
 An Appreciation of the Late Dr. Greene. By William A. Giffen, D.D.S., Detroit.
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[*The Journal of the National Dental Association*, May, 1916]

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 Some Evidences of the Importance of the Dental Path as a Source of Serious Localized and
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DENTAL RESEARCH—ITS PLACE IN PREVENTIVE MEDICINE

By CHARLES H. MAYO, M.D.

The more recent advance in the prevention of disease, and that wherein dentists are so much interested, is the knowledge that chronic diseases, acute diseases and special local diseases, i. e., neuritis, sciatica and acute paralysis come from mouth infections in the majority of instances, also that appendicitis, diseases of the gall-bladder and ulcerated stomach are caused by bacterial infarcts in the capillary circulation at the base of the mucous cells in these organs, and is caused in the same manner from local infections. While there are several sources in the body for the entrance of bacteria and their culture in a local focus, the mouth is far the most common situation. The tonsils very commonly harbor disease germs. We find these germs in pyorrhea in cavities and abscesses at the roots of teeth from natural decay and in apical abscesses all of which are often the result of bad dentistry. Bacteria, as has been noted, for all existence seem to be created by environment, or development for specific purposes and bacteria cultured from certain disease regions of the body seem to have almost a specific selection for similar regions in animals when injected into their blood; thus appendicitis, gall-bladder disease including stone, and ulcer of the stomach, can be reproduced as well as diseases of the nerves which are caused by infection. As before stated these bacteria may be changed by environment and culture into different but similar strains having somewhat different activities. On the other hand, the germ of measles, produces measles, the scarlet fever germ produces scarlet fever. Typhoid, small-pox and all the known contagious diseases reproduce a definite specific disease.

Rosenow has been able to produce, with bacteria cultures from diseased teeth in man, similar diseases of teeth in animals; the proportion is small as these animals are more resistant to such infections. It must not be understood that the specificity of bacterial selection of location only occurs, but that there are side-lines of development in other organs and tissues. There would be a few cases of rheumatism and a few cases of in-

farction of the kidney, a few instances of myocardial inflammation and similar conditions throughout the body, but the main result of the experiment is to locate the disease in a similar region from that which the culture was taken, when cultured from secondary foci of disease. Those persons who have chronic local disease and also a septic focus about teeth or tonsils may often have the specific location of the primary focus proved by experimental work in animals, as well as being cured of the local infection.

There is much to be studied in the line of dental research, and there is a great necessity for this very building. It has come just at the psychological moment, when we are all engrossed in the study of diseases from their inception. For this reason, the dentist must have a greater knowledge of medicine, and a certain amount of knowledge of dentistry, so far as concerns the examination of patients, should be the province of every physician—not that they must treat these diseases, but that they should be able to recognize the necessity for treatment. The bulk of the dentist's work should be referred work of physicians versed in the rudiments of dentistry.

[*The Journal of the British Dental Association*, May 15, 1916]

Original Communications

*Dental Treatment in Paris. By T. A. Coysh, L.D.S., Eng.
The Common-sense of Asepsis. By J. W. Beacock, L.D.S., Eng.
Dental Hygienists. By Edward F. Brown.

Selected Article

"The Significance of the Radiographs of the Piltdown Teeth," (Illustrated.) By W. Courtney Lyne, L.D.S., Eng.

Editorial

"The Piltdown Canine."

DENTAL TREATMENT IN PARIS

By T. A. COYSH, L.D.S., ENG.

In the early days of the War, much of the prosthetic work for our soldiers proved to be unsatisfactory, largely because it was performed on lines unsuitable for the conditions which obtained. Systems of treatment were adopted or insisted upon by those concerned, which were suitable only for private practice or hospital conditions; and in an effort to conform to an impracticable standard of oral hygiene, wholesale extractions and immediate replacements were performed for men who only had days or a week or so at liberty before being drafted out on active service. The re-

sult naturally enough was failure to satisfy the authorities and frequent invalidings because of defects or deficiencies.

It was interesting to observe, during a recent visit to Paris, the manner in which the problem was being dealt with there. The staff of the École Dentaire of Paris has realized that thorough oral hygiene is an ideal impossible of attainment under war conditions, and seems to have evolved some such theory as this: From the immediate military point of view, the man's health is of importance only so long as he is on active service. As he is provided with boots and clothing during that time, and the condition of these requisites is of importance for just that period, so, if it can be arranged that his mouth is comfortable, that he can masticate with his own teeth or with the help of an appliance, which is adequate, strong and serviceable for the time being, and which can be produced rapidly and cheaply and with only a small expenditure of time.

[*New York Medical Journal*, April, 1916]

OUR MOST COMMON DISEASE

The most common disease to which the human body is now subject is caries of the teeth. This is no new statement, and, like previous statements of the same kind, it will doubtless arouse no revolt of endeavor to check or abolish the evil. The admission of the prevalence of this loathsome disease—for it makes the mouth a veritable cesspool—is an admission that the average human body is a physiological failure. There is no more reason why the teeth should be imperfectly developed, or fail to stand up under use, than that any other structures in the body should be so defective. Doubtless the other structures of the body may be correspondingly inadequate, if we only knew it, but we do not, for the present, realize this possibility. Wild animals have perfect teeth, or at any rate, no large percentage of them have rotting teeth in their heads before they are half done with life. Our natural inheritance is, therefore, not to blame for the condition, and indeed there are still a few specimens of man with perfect teeth. Either physical degeneration of our parents is to blame, or the fault lies with the individual, and, according to what little we know of the laws of heredity, the blame would seem to fall upon the owner of the faulty teeth.

The cause cannot be simply one of not using a toothbrush or some alkaline lotion. Wild animals and many men have the most beautiful teeth without the use of either. As for the alkaline wash, its action can last but a few minutes at most, and, as a preservative of the teeth from destruction, it is manifestly an absurdity. It is also absurd that a body which is given the right sort of food in the right amount, and that other-

wise behaves in seemly fashion, should not, as in the case of the animal, keep its mouth clean without other aid than the chemicals of the blood and the saliva. How otherwise does the animal manage its dental perfection?

The monetary side of this disease is something appalling. The dental bills of the country must far exceed the doctor bills, or would, if all could afford to have needed filling of their faulty members, while the cost of medical services for disease caused indirectly by decayed teeth and pyorrhea adds greatly to the financial drain of the land.

Of all national needs, a thorough investigation of dental caries and its primary and real (not its secondary and incidental) cause is most urgent. If we can spend millions to study occasional diseases such as infantile paralysis and pellagra, why not more to check this most common disease which is daily sapping the health and wealth of the land, and which, moreover, is indicative of some hidden unhygienic condition which produces degenerate human bodies? Recent investigations, which seem to lay the blame on faulty feeding in childhood, i. e., administration of too much pap, at the expense of foods which require mastication, promise to lead to a real prophylaxis. This would be a notable achievement on the part of dietetics.

[*Journal American Medical Association*, May 20, 1916]

GRANULOMA PYOGENICUM OF THE LIP

BY RICHARD L. SUTTON, M. D., KANSAS CITY, MO.

Despite the comparative frequency with which granuloma pyogenicum occurs, the condition has attracted very little attention in this country. The disorder was first described under the title of "botryomycosis hominis" in 1897, by Poncet and Dor who believed the disease to be analogous to botryomycosis of horses (Rivolti). Two years later Sabrazès and Laubie demonstrated the identity of the so-called "botryomycosis" with the common *Staphylococcus aureus*, and their conclusions were verified by Bodin in 1902. Since then French writers have referred to the condition as "pseudo-botryomycosis hominis" or "granulome pedicule" (Lenormant). In 1904, Hartzell reported a series of four cases of the disease from America, and suggested for it the very apt designation of "granuloma pyogenicum," a title which has received general approval and acceptance. Kuttner has proposed the name of "granuloma telangiectodes," but it is hardly probable that this appellation will be widely adopted, as it is neither so euphonious nor so appropriate as the one introduced by Hartzell. Wile has recently made an exhaustive study of the condition. He concludes that "the entire group of so-called pseudo botryomycosis hominis, granuloma simplex, granuloma telangiectodes

and granuloma pyogenicum may be grouped in one class, and may be regarded as ordinary granulation tissue, appearing, for as yet undetermined reasons, in the unusual form of a tumor. The etiologic factor is not a fungus, but probably the *Staphylococcus aureus*, perhaps in an unfavorable soil or in an attenuated form. The histologic changes are essentially the same in all forms, minor differences being simply in degree of vascularity and inflammation. Although never malignant, the growths tend to recur, unless cauterization of the base is practised."

The little tumors are commonly, but not invariably, situated on those parts which are most frequently subjected to trauma; consequently the hands and feet are favorite sites for their development (Brocq).

Cases involving the lip have been reported by Poncet, Savariaud and Deguy, Delore, Legroux, Picqué, Le Berre, Terrier, Balzer and Alquier and Noury in France, and Gilchrist in America. During the past year I have observed three instances in which this region was affected.

OBITUARY

Dr. Carroll C. Huntley, whose office has been at 268 Westminster Street, Providence, R. I., died in the month of May, in the Rhode Island Hospital of cerebral hemorrhage, following an illness of about two weeks duration.

Dr. Huntley will be missed by a wide circle of friends, on account of his prominence in his profession and of his genial disposition.

BOOKS RECEIVED

TRAITÉ D'HYGIENE DENTAIRE ET DE PROPHYLAXIE ORALE PAR LE DR. ALCIDE L. LAROSE, Docteur et licencié en Chirurgie-Dentaire, Bachelier en Médecine, Président de la Société d'Odontologie de Montreal, Avec 15 Figures intercalées dans le texte, Montreal, 1916. J. A. Caron & Fils, Imprimeurs.

THE INTERNAL ANATOMY OF THE FACE. By M. H. CRYER, D.D.S., Professor of Oral Surgery, University of Pennsylvania; Oral Surgeon to the Philadelphia General Hospital; Second Edition, Revised and Enlarged. Octavo 360 pages with 377 engravings. Cloth, \$4.50 net. Lea and Febiger, Publishers, Philadelphia and New York, 1916.

SOCIETY NOTES

OFFICIAL PROGRAM

TWENTIETH ANNUAL SESSION OF THE NATIONAL DENTAL
ASSOCIATION

TO BE HELD IN

LOUISVILLE, KENTUCKY, July 24, 25, 26, 27, 28, 1916

MONDAY, JULY 24TH

First Session—Board of Trustees (Seelbach Auditorium), 10 A. M.

HOUSE OF DELEGATES

Opening Session, 11 A. M. (Seelbach Auditorium. All Sessions of the House of Delegates will be held in the Seelbach Auditorium.)

FIRST GENERAL SESSION

TUESDAY, JULY 25TH, 10 A. M.

(Keith's Theatre)

Invocation. Doctor W. W. Landrum, President Louisville Ministerial Association, Louisville, Ky.; Address of Welcome, Gov. A. O. Stanley, on behalf of State, Frankfort, Ky.; Mayor John H. Buschemeyer, on behalf of City, Louisville, Ky.; Chas. A. Weber, on behalf of Publicity and Convention League, Louisville, Ky.; Response to Address of Welcome, W. H. G. Logan, Chicago, Ill.; President's Address, Thomas P. Hinman, Atlanta, Ga.; Oration, By George B. Hayes, Neuilly (Paris), France; (Chief Dental Surgeon in Dental Section of the American Ambulance at Neuilly (Paris), France.)

SECTION PROGRAM

SECTION I

H. E. Friesell, Chairman, 1206 Highland Bldg., Pittsburgh, Pa.

E. D. Coolidge, Vice-Chairman, 59 E. Madison St., Chicago, Ill.

DeLos L. Hill, Secretary, 610 Grant Bldg., Atlanta, Ga.

Operative Dentistry, Nomenclature, Literature, Dental Education and allied subjects.

TUESDAY, JULY 25TH, 2 P. M.

(Keith's Theatre)

"Silicate Cements," By W. Clyde Davis, Lincoln, Nebraska; "Application of Amalgam in Modern Dentistry," By John V. Conzett, Dubuque, Iowa.

SECTION III

C. W. Mills, Chairman, Chillicothe, Ohio.

L. E. Custer, Vice-Chairman, 28 North Ludlow St., Dayton, Ohio.

B. L. Shobe, Secretary, Tulsa, Oklahoma.

Prosthodontia, Orthodontia, Metallurgy, Chemistry and allied subjects.

TUESDAY, JULY 25TH, 2 P. M.

(Gayety Theatre)

"Taking Impressions in Modeling Compound and Anatomical Setting Up of Teeth," By James P. Ruyl, New York City; "Prevention of Permanent Malocclusion," By J. Lowe Young, New York City.

TUESDAY, JULY 25TH, 2 P. M.

(Watterson Auditorium)

"System in State Society Work," By A. M. Flood, San Francisco, Cal.; "The Postgraduate Type of Dental Meeting," By C. R. Lawrence, Enid, Oklahoma; "Essentials for the Success of the Progressive Clinic Plan," By Weston A. Price, Cleveland, Ohio.

HOUSE OF DELEGATES

TUESDAY, JULY 25TH, 4:15 P. M.

Second Session—Seelbach Auditorium

SECOND GENERAL SESSION

TUESDAY, JULY 25TH, 8 P. M.

(Keith's Theatre)

RESEARCH DEPARTMENT

Reports of Special Researches

Pathological, Bacteriological and Clinical Studies

SECTION PROGRAM

SECTION II

Chalmers J. Lyons, Chairman, Ann Arbor, Mich.

F. B. Moorehead, Vice-Chairman, People's Gas Bldg., Chicago, Ill.

Mark E. Vance, Secretary, Fraternity Bldg., Lincoln, Neb.

Oral Surgery, Anatomy, Physiology, Histology, Pathology, Etiology

Prophylaxis, Oral Hygiene, Materia Medica and allied subjects.

WEDNESDAY, JULY 26TH, 9 A. M.

(Watterson Auditorium)

"The Physiological Function of Tooth Form," By James Mark Prime, Omaha, Nebraska;

"Actinomycosis, with a Report of a Case," By T. E. Carmody, Denver, Colorado.

RESEARCH DEPARTMENT

WEDNESDAY, JULY 26TH, 9 A. M.

(Keith's Theatre)

Reports of Special Researches

ORAL AND DENTAL HYGIENE

WEDNESDAY, JULY 26TH, 9 A. M.

(Seelbach Auditorium)

Charles H. Oakman, Chairman, 1241 David Whitney Bldg., Detroit, Mich.

J. D. Patterson, Kansas City, Mo.

L. D. Mitchell, Oklahoma City, Okla.

H. F. Hoffman, Denver, Colo.

B. S. Hurt, Rochester, N. Y.

Papers by Otto U. King, Huntington, Ind.; L. G. Mitchell, Oklahoma City, Okla.; J. R. Bernheim, First Lieutenant Dental Surgeon, in the United States Army Dental Corps, Fort Logan, Colorado; Harvey J. Burkhart, Batavia, New York.

CLINIC PROGRAM

Wm. H. G. Logan, Chairman, 29 E. Madison St., Chicago, Ill.

C. N. Hughes, Vice-Chairman, Grant Bldg., Atlanta, Ga.

H. B. Tileston, Secretary, 916 Starks Bldg., Louisville, Ky.

The Clinic Committee of the National Dental Association has arranged for an Illustrated Lecture Clinic, a Progressive Clinic and Surgical Clinics under conductive and general anesthesia.

WEDNESDAY, JULY 26TH, 1:30 P. M.

(Keith's Theatre)

ILLUSTRATED LECTURE CLINIC

These clinics will be presented to the entire membership at Keith's Theatre. Time to be occupied by each clinician will vary from twenty to twenty-five minutes.

HOUSE OF DELEGATES

WEDNESDAY, JULY 26TH, 4:30 P. M.

Third Session—Seelbach Auditorium

THIRD GENERAL SESSION

WEDNESDAY, JULY 26TH, 8 P. M.

(Keith's Theatre)

Symposium: Sections II and III

SECTION II

Symposium

SECTION III

WEDNESDAY, JULY 26TH, 8 P. M.

Symposium

THE DENTAL DIGEST

SECTION PROGRAM AND ORAL SURGERY CLINIC

THURSDAY, JULY 27TH, 9 A. M.

(Watterson Auditorium)

Sections I, III and Anesthetists

SECTION I

"Cavity Preparation for Gold Foil, Gold Inlay and Amalgam Operations," By Walden I. Ferrier, Burlington, Wash.; "Present Status of Porcelain in Dentistry," By Hugh Avary, San Francisco, Cal.

SECTION III

THURSDAY, JULY 27TH, 9 A. M.

(Keith's Theatre)

"Crown and Bridge Work," By Forrest H. Orton, St. Paul, Minn.; "Chemistry and Metallurgy," By J. P. Buckley, Chicago, Ill.

INTERSTATE ASSOCIATION OF ANESTHETISTS

THURSDAY, JULY 27TH, 9 A. M.

(Gayety Theatre)

(Special Session with N. D. A.)

1. Introductory: By Wm. Hamilton Long (M.D.) (5. min.), Louisville, Ky.; 2. Chairman's Address: "Anesthesia in the Curriculum, Clinic and Private Practice" (20 min.), By Hugh W. McMillam, Cincinnati, Ohio.

ORAL SURGERY CLINIC

THURSDAY, JULY 27TH, 9:30 A. M.

Clinic Program (Continued)

Operations under conductive and general anesthesia will be held in the City Hospital before such audiences as the four operating rooms put at our disposal will accommodate.

THURSDAY, JULY 27TH, 2 P. M.

Section II and Research Department

SECTION II

(Watterson Auditorium)

"The Aseptic Root Resection Operation," By Robert H. Ivy, Milwaukee, Wis.; "Focal Infection in the Mouth and Indications for Radical Removal of Teeth in Such Cases," By Virgil Loeb, St. Louis, Mo.

RESEARCH DEPARTMENT

THURSDAY, JULY 27TH, 2 P. M.

(Keith's Theatre)

Reports of Special Researches
Chemical and Metallurgical Studies

HOUSE OF DELEGATES

THURSDAY, JULY 27TH, 4:15 P. M.

Fourth Session—Seelbach Auditorium

FOURTH GENERAL SESSION

Thursday, July 27th, 8 p. m.

Symposium: Section I and State Society Officers' Section

SECTIONAL PROGRESSIVE CLINIC

FRIDAY, JULY 28TH, 9:30 A. M.

(Armory)

Tickets of admission may be secured in the Armory from 8:30 to 9:30 on the morning of the clinic.

These clinics will be presented to the entire membership in the balcony of the Armory which is to be divided into twenty-four rooms with seats arranged in amphitheatre form. The demonstrations will be given by members of the National Association residing in Michigan, Indiana, Kentucky and Tennessee.

All clinicians are requested to be in the room bearing the corresponding starting number to that placed behind their names not later than 9:15 A. M. for final instructions.

Clinicians and subjects they will present are as follows:

CEMENT CLINIC

Cements—all forms, the technic of mixing and insertion.

GOLD INLAY CLINIC

Demonstrating the technic for the construction of inlays for typical and complicated forms of cavities.

RADIOGRAPHY CLINIC

Interpretation of dental radiographs.

LOCAL AND CONDUCTIVE ANESTHESIA CLINIC

The technic of making novocain suprarenin solutions, the care of the syringe and needles. The technic of injections of novocain suprarenin for local and conductive anesthesia.

REMOVABLE BRIDGEWORK CLINIC

Partial dentures and removable bridge work with description of the various forms of attachment, including the type indicated to engage vital teeth.

IMPRESSION TAKING IN MODELING COMPOUND CLINIC

Taking impressions in modeling compound with the mouth closed and under normal biting stress.

FULL DENTURE CLINIC

Full denture construction not including impression taking.

CROWN CLINIC

Individual crowns and crown abutments for bridgework.

LAST GENERAL SESSION

FRIDAY, JULY 28TH, 2 P. M.

(Keith's Theatre)

Installation of Officers

NOTES

All General Sessions will be held in Keith's Theatre. Exhibitors in Armory. Registration in Armory. National Association of Dental Examiners, July 28th and 29th, in Leather Room. Kentucky State Dental Association, July 24th, 10 A. M., in Armory. National Association of Dental Faculties, July 22nd to 24th, in Leather Room, Seelbach Hotel. Educational Council of America, July 24, Room 1, Tenth Floor, Seelbach Hotel. Delta Sigma Delta, July 24th, Seelbach Hotel. Psi Omega Fraternity, July 24, Watterson Auditorium. Interstate Association of Anesthetists, July 26,—will hold all their sessions in Red Room, Seelbach Hotel, except Thursday, July 27, 9-12 M.—McCauley's Theatre. Association of Military Dental Surgeons, July 26-27, Hotel Henry Watterson, (Dining Room, on mezzanine floor). All section papers will be limited to 30 minutes (chapter XIV, Sec. 2, Constitution and By-Laws). Xi Psi Phi Fraternity, July 24, Auditorium, Watterson Hotel. Dental Manufacturers' Association, Armory, July 25-28, at call of President.

NEW LEGISLATION AFFECTING THE ARMY DENTAL CORPS

The Conference Committee's report upon the Army Reorganization Bill was agreed to by the Senate May 17th, by the House May 20th, and approved by the President June 3rd. Incorporated in this bill is the following provision relating to the Army Dental Corps:

"The President is hereby authorized to appoint and commission, by and with the advice and consent of the Senate, dental surgeons, who are citizens of the United States, between the ages of twenty-one and twenty-seven years, at the rate of one for each one thousand enlisted men of the line of the Army. Dental surgeons shall have the rank, pay, and allowances of first lieutenants until they have completed eight years' service. Dental surgeons of more than eight but less than twenty-four years' service shall, subject to such examination as the President may prescribe, have the rank, pay, and allowances of captains. Dental surgeons of more than twenty-four years' service shall, subject to such examination as the President may prescribe, have the rank, pay, and allowances of major: *Provided*, that the total number of dental surgeons with rank, pay, and allowances of major shall not at any time exceed fifteen: *And provided further*, That all laws relating to the examination of officers of the Medical Corps for promotion shall be applicable to dental surgeons."

It will be noted that this does not contain all the recommendations submitted by the Legislative Committee of the National Dental Association and strongly championed by them,

as well as many loyal supporters from all sections of the United States. However, it should be recognized that all legislation, especially when it becomes necessary for a Conference Committee to harmonize the conflicting provisions passed by the two branches of Congress, is more or less of a question of compromises and best results can only be expected when a sufficient number of the Conference members are friendly to the interests involved. Therefore, we feel that those who have been in close touch with all these circumstances will fully appreciate the situation and accept what has been secured as an improvement over present conditions.

In this connection, and as a comparison, the following may be interesting: In 1901 Congress passed an act establishing an Army Dental Corps. The members of the Corps served as Contract Dental Surgeons until 1911, when, under specific conditions, Congress granted them the rank of First Lieutenant. At the present time there are seventy-five members in this Corps, thirty-six First Lieutenants, and thirty-nine Acting Dental Surgeons. Thus, it will be noted that two additional grades, with *actual rank*, have been added, and when this new legislation becomes fully operative, that is up to its full quota, there will be approximately two hundred members of the Corps, which is on a basis of "one to each one thousand enlisted men in the line of the Army." *Actual rank* has been intentionally emphasized since there was a strong and persistent effort, upon the part of a majority of the Senate Military Affairs Committee, to deprive the members of the Corps of the rank of First Lieutenant. This attempted injustice was corrected by the Senate adopting the first and most important provision of Senator Pomerene's amendment, that is, *actual rank*.

In view of these changed conditions the future of this service will be decidedly more attractive and should not only strongly appeal to the dental graduates of to-day, but this should also stimulate the members of the Corps to develop it to its highest possible efficiency.

For the benefit of those not familiar with the procedure in securing this legislation it may be very properly stated that this has not been accomplished without a vigorous fight and many sacrifices, upon the part of a goodly number of persons. Strong opposition, as well as some positive supports, developed from sources least expected and in due time, we expect, as a matter of justice, to make a public acknowledgment to those who loyally coöperated in behalf of this legislation and made possible that which has been secured.

Respectfully submitted,

Homer C. Brown, Chairman, Legislative Committee, N.D.A.

FUTURE EVENTS

- July 12-15, 1916.—New Jersey State Dental Society, Asbury Park, N. J.—JOHN C. FORSYTH, Trenton, N. J., *Secretary*.
- July 20-22, 1916.—American Society of Orthodontists, Pittsburgh, Pa. Address communications to F. M. CASTO, 520 Rose Bldg., Cleveland, O.
- July 20-22, 1916.—Southern California Dental Association College of Dentistry, Los Angeles.—W. E. SIBLEY, *Secretary*.
- July 24, 1916.—Kentucky State Dental Society, Louisville, Ky.—W. T. FARRAR, 519 Starks Bldg., Louisville, *Secretary*.
- July 24, 1916.—International School of Orthodontia of Kansas City, School House quarters, 3321 Troost Ave., Kansas City, Mo.—W. F. STOFF, *Secretary*.
- July 25-28, 1916.—National Dental Association, 1st Regiment Armory, Louisville, Ky.—OTTO U. KING, Huntington, Ind., *Secretary*.
- September 15, 1916.—The next regular biennial meeting of the Canadian Dental Association will be held in Montreal.
- October 9-15, 1916.—Arizona Board of Dental Examiners, Phoenix, Ariz.—EUGENE MC-GUIRE, 302 Noll Bldg., Phoenix, *Secretary*.
- October 18-20, 1916.—Virginia State Dental Association, Richmond, Va.—C. B. GIFFORD, Norfolk, Va., *Corresponding Secretary*.
- November 16-18, 1916.—St. Louis Dental Society, Planters Hotel, St. Louis, Mo.—CLARENCE O. SIMPSON, Century Bldg., St. Louis, *Secretary*.
- December 5-7, 1916.—Ohio State Dental Society, Dayton, O.
- January 23-25, 1917.—American Institute of Dental Teachers, Philadelphia, Pa.—ABRAM HOFFMAN, 529 Franklin St., Buffalo, N. Y., *Secretary-Treasurer*.